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ORIGINAL ARTICLES.

ON THE REMOVAL OF NASO-PHARYNGEAL FIBROMATA BY THE GALVANO-CAUTERY, OR COLD-WIRE ÉCRASEUR.

BY E. FLETCHER INGALS, A.M., M.D., CHICAGO.

Read to the Section of Ophthalmology, Otology and Laryngology of American Medical Association, May 6, 1884.

Naso-pharyngeal fibromata usually have their origin in the periosteum which covers that portion of the base of the skull forming the roof of the naso-pharynx.

These tumors may extend downward into the mouth, forward into the nasal cavity, or upward, perforating the cranium and pressing upon the brain.

When large, they not infrequently send off prolongations into the maxillary sinus, and in some cases the frontal and sphenoidal sinuses are involved, consequently in some instances great deformity of the face results.

Owing to the obstruction thus caused, respiration and deglutition may be seriously interfered with, and in consequence of the pressure, the senses of hearing, sight, and smell are more or less impaired.

These growths are hard to the touch, and are usually rounded, having a smooth surface, slightly lighter in color than the surrounding mucous membrane; sometimes, however, and particularly when the nasal cavities are involved, these tumors are lobulated in form.

Some of them grow slowly, but in other cases they increase in size with great rapidity; and, unfortunately, they are quite liable to return after removal.

Aside from the symptoms already referred to in connection with the special senses, they may cause severe pain, frequent epistaxis, and constant catarrhal discharge. They eventually disturb the sleep, and prevent the patient from taking sufficient food; exhaustion supervenes, and ultimately, if not removed, they are liable to prove fatal.

Various forms of treatment, such as the local application of chemical agents and electrolysis, have been tried, but nothing short of a complete destruction of the growth by operative measures can give satisfactory results.

The operation recommended by surgeons, consists in tearing or gouging out the tumor after access to it has been obtained by removal of the hard and soft palate, or the superior maxillary bone, the latter being the procedure generally resorted to.

Within a few years laryngologists have demonstrated the practicability of a much safer operation, which has thus far been attended with better results than when the maxilla has been removed.

This operation is performed with the galvano-cautery, or steel wire écraseur, the loop being passed through the nostrils in some cases, and in others through the mouth and up behind the soft palate.

Within the past two years I have operated on four cases of naso-pharyngeal tumors by this latter method, and with better results than could have been obtained by excision of a part or the whole of the superior maxillary bone.

CASE I.—Fibroma. In May, 1881, I operated upon the first case of this kind which had come under my observation.

The patient, J. W., æt. 21, stated that about twenty months previous he had contracted a severe cold, since when he had been unable to breathe through the right nostril, excepting with forced respiration, and then but slightly. The left nostril had also been occluded whenever he had a cold, but at other times it had been comparatively free.

Rhinoscopic examination revealed a large ovoid tumor blocking the right posterior nares and overlying about half of the left. With the galvano-cautery écraseur I removed the larger part of the growth, and would have secured all had not the current failed me, so that I was obliged to readjust the wire, which the bleeding prevented me from doing perfectly.

Prof. I. N. Danforth made a microscopic examination of the tumor, and pronounced it a small-celled sarcoma, the most benignant of the fibromata.

A few weeks later the remainder of the growth was perfectly removed by the galvano-cautery écraseur.

Sixteen months later I found a small tumor at the seat of the old growth, about the size of a hazel nut. This I removed with Jarvis' écraseur.

At the present time, two years after the original operation, a small sessile swelling may be seen at the posterior end of the upper turbinated bone. This presents no point where the écraseur could be made to hold, and as it has enlarged very slowly, I have not attempted to cauterize it.

CASE II.—Fibroma, H.L., aged 19. Was brought me by my friend, Dr. F. E. Olney, of Warsaw, Ind. I found a large naso-pharyngeal growth, which presented slightly below the soft palate, and filled the naso-pharyngeal space.

It had been annoying him very much for twelve months by preventing nasal respiration and causing profuse discharges. The tumor was so large that I

found it impossible to pass Bullocs' canula or an Eustachian catheter through the nares. However, after much difficulty, I succeeded in passing a small, soft rubber catheter through the right nares. In doing this, all excepting half an inch of the distal end of the catheter had been kept rigid by the stylet, so that when pressure was made the flexible end insinuated itself between the growth and the palate, and was finally forced into the larynx. A string was then attached to the catheter, and by means of this an elastic band was drawn through to tie the soft palate forward; and subsequently a loop of platinum wire was drawn back into the mouth.

The loop was opened, and by patient manipulation for about three hours, it was carried up until it encircled the base of the tumor, close to the bone from which it sprang. The ends of the platinum wire were then pushed through the tubes of an electrode, which was forced back to the tumor.

The handle with which the conductors from the battery were connected was then attached, the platinum wires fixed to the ratchet, and the current turned on; but I soon found that a short circuit was established through the metallic axle of the rachet wheel. I then removed the wheel and attached the wire to a lead pencil, by means of which traction was made and the tumor rapidly cut through.

The base of the tumor was divided quicker than if the ratchet could have been used, and as a consequence profuse bleeding ensued, which, however, was checked in a short time by the insufflation of tannin upward behind the palate.

The tumor was slightly nodular in form, and measured one and one-half inches in its antero-posterior diameter, and one and three-fourths inches in its vertical diameter.

It had been cut off close to the basilar process of the occipital bone, to which it had been attached by a pedicle three-quarters of an inch in diameter.

The patient returned to his home the same evening. The cut surface healed over promptly, and for two months he seemed perfectly well, but at the end of that time Dr. Olney noticed that the growth was reappearing. It grew rapidly for about two months, when it had attained nearly half its former size, since when it has remained stationary.

The patient's general health is now perfect. The tumor will be again removed as soon as the patient can spare the time, and then the stump will be thoroughly cauterized.

CASE III.—Fibroma. J. H., aged 26, came to me during the latter part of the winter of 1882–3, complaining only of a slight cold. I noticed a peculiar lack of nasal resonance in his voice, which directed my examination to the naso-pharynx, when I found a tumor about the size of a hickory nut, which, from its position, and from the movements that could be given to it with a probe, seemed to be attached to the upper portion of the posterior border of the vomer.

With a modification of Jarvis' écraseur, half an inch of the end of which had been bent up at nearly a right angle, I passed a steel wire behind the palate and ensnared the tumor.

Up to the time when the tumor should have been nearly cut off, I had no difficulty in tightening the wire by the milled wheel, but afterward it became almost impossible to turn the wheel with the fingers. However, the wire was gradually tightened, and finally, with the aid of a pair of pliers, such as used by gas-fitters, the wheel was screwed down until the wire was released. The tumor presently dropped into the mouth, and was spat out. Upon examining the instrument, it was found that the great difficulty had been caused by the soft tissues being drawn into the end of the canula, which had been split down to the angle by the pressure. The tumor had the form of a flattened sphere, measuring one-half inch in its thickness.[1] Afterward another similar growth was detected in the posterior part of the left nasal cavity, which subsequently came down into the naso-pharynx. I have made one attempt to catch the tumor in the snare, but failing on the first trial, I was obliged to defer the operation for want of time.

CASE IV.—Fibro-Myxoma. A. P., æt 32, machinist, came to the Central Dispensary in December, 1882. He gave the following history: When two years of age, his mother noticed something growing in his nose.

Nothing was done for it until he was fourteen years of age, the growth having increased slowly in size during the interval. He was then operated on, and a large mass was removed.

He was free from the trouble for some time, but at the age of nineteen it had returned so as to necessitate another operation.

From that time until about a year before coming to me he had been free from the trouble.

Upon examination, I found a large growth completely filling the right nasal cavity, and closing the left by pressure.

It also passed back and filled about half the naso-pharynx.

The pressure caused considerable deformity of the nose. After several futile attempts to tear away the anterior portion of this tumor with forceps, about a third of it was cut off with galvano-cautery wire loops. Finally, with a modification of Jarvis' snare nearly all of the growth has been removed, so that there is now no obstruction to nasal respiration, but the treatment is not yet completed. In this case it was impossible to engage any considerable portion of the tumor at once, as the instrument could not be passed through the nose until most of the growth had been taken out; therefore, at each sitting, I removed two or three pieces about the size of filberts, and then allowed the patient to go.[2]

At the meeting of the American Laryngological Association held in New York, in May, 1883, Dr. Rufus P. Lincoln presented three cases which he had operated upon successfully by the galvano-cautery écraseur. For the sake of comparison, he also gave a tabulated statement of the results of seventy-four operations for naso-pharyngeal tumors which he had found reported.

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[1] Dr. E. P. Davis, of this city, examined the growth microscopically, and reported it almost wholly fibrous.

[2] Dr. E. P. Davis found this to be a fibro-myxoma.

The statement which has been furnished me by Dr. Lincoln is substantially as follows:

The seventy-four operations were performed on fifty-eight patients.

Thirty-nine operations were done upon twenty-eight patients by section of the facial bones or laying open of cicatrices resulting from previous operations of the same character. Of these, in thirteen, the record ceased shortly after the operation, and the final results were unknown. Of the fifteen remaining, eight died from the operation, and in three others it nearly proved fatal, while in only four was there no return of the tumor within a year.

Seven operations were done on seven patients by scissors, knife or forceps. One of these died, five were lost sight of, or no subsequent report was made, and in only one are we told there was no recurrence within a year.

Two cases had been treated with injections of chloride of zinc, or cauterization by the same agent. In one the tumor returned, the other case was lost sight of. Three cases were treated by electrolysis. One did not recur within a year; the others disappeared. Of these forty cases, in twenty-one the history after the operation was incomplete, and probably not favorable to the operation.

Nine, nearly one-fourth of all the cases, or about one-half of those in whom the history was complete, died, and only seven remained well for one year.

Contrasting with these the cases operated upon by the ordinary écraseur, or ligation, we find that of eleven operated on none were fatal, two were lost sight of, and of those remaining there was no recurrence at the end of a year in four cases, which is a very much better showing than for the preceding operations.

Nine have been operated on by the galvano-cautery écraseur, and one by the actual cautery. None of them were fatal; two were lost sight of, and six were well at the end of a year, results infinitely superior to those of any of the other methods.

The remarkable success of this form of treatment is doubtless due to thorough cauterization of the stumps of the tumors, which has been practiced in several instances. In my own cases, the stumps of the tumors have not been cauterized.

In one there was no recurrence at the end of a year. In another there was speedy recurrence.

In the others the operation is not yet completed, and as they were dispensary patients, the disagreeable symptoms having been removed, it is probable that I will not see them again until the tumor has regrown sufficiently to be annoying.

From my experience in these cases, I believe that either with the galvano-cautery or with the steel wire écraseur the great majority of these tumors may be completely removed, and, as has been shown by Dr. Lincoln, if their bases are thoroughly cauterized with the hot wire, they are not likely to recur.

The results thus far are greatly in favor of this method of operating over that usually advised by general surgeons, for this leaves no scar, the tumors are less likely to recur, and the risks of the patient are infinitely less.

JEQUIRITY.

BY T. E. MURRELL, M.D., LITTLE ROCK, ARK.

[Read before the State Medical Society of Arkansas, at the Eighth Annual Session, Little Rock, May 30 and 31, 1883.]

Jequirity, *abrus precatorius*, is a small shrub of the order of leguminosæ, growing in tropical America, which bears a beautiful coral-like bean, commonly known as licorice bean. In Brazil the natives have a formula for making an infusion from the bean, which they use in granular conjunctivitis. According to the formula, 32 beans make about two pints of the infusion. The method of using it is to brush it on the inner surface of the lids, instil it into the eye, or apply it on compresses to the outer surface of the lids, by means of which some of it comes in contact with the conjunctiva and cornea.

The literature on the use of jequirity up to the present time is rather meager. In the *American Medical Weekly*, of January 20, 1883, there is this notice:

"Jequirity in Granular Conjunctivitis. This drug, so much vaunted of late in the treatment of granular conjunctivitis, has not yielded very good results in the hands of Dr. Ferrier. Cardoso, of Rio Janeiro, claimed to have secured excellent results by the use of a topical application of one part of the drug to one hundred of boiling water to the granulations. Wecker has had the same experience as Ferrier."

It seems that a different construction has been put on De Wecker's report of his use of it, which I have not seen, by Dr. Gruening, of New York. In the *New York Medical Record* of May 17, 1883, he says: "The gratifying results obtained by De Wecker in his cases of chronic granulation and corneal opacity, induced me to employ the infusion in a few cases of inveterate pannus." Gruening then reports two cases where he used the infusion of licorice bean with the most gratifying results. One was a man 55 years of age, and the other a girl of ten years. In ten days both were dismissed with smooth lids, free of granulations, and a total disappearance of the pannus.

Now and then one comes across a case of granular conjunctivitis that fails to yield to all ordinary or extraordinary treatment; where there exist excessive granulations and inflammatory infiltration of the conjunctiva, a dense and perhaps fleshy pannus, with intense photophobia and lachrymation, completely wearing out the sufferer, and rendering him hopelessly blind.

I had just such a case on hand when I read Dr. Gruening's paper, and at once wrote to Mr. Richard Fingerhut, druggist, 404 Fourth Ave., New York, for some of the beans. He wrote me that he sold the infusion ready prepared, and so I ordered a pint of the infusion. I used it as did Dr. Gruening, brushing it on the conjunctiva three times daily, and keeping a cloth wet with it on the eyes almost constantly.

The patient had been suffering most excruciatingly for several weeks. The pannus was so dense that he could only perceive light, the right cornea had

yielded, and was in a condition of kerato-conus, and the inflammation was of a severe type, the villi of the palpebral conjunctiva being greatly hypertrophied and engorged.

Twenty-four hours after commencing the use of the infusion, a scarcely perceptible change in the inflammatory process had begun. Forty-eight hours brought a well-marked increase of the inflammation, with beginning œdema of the lids, some increase of pain, and a beginning diphtheritic membrane on the conjunctiva. Three days' treatment increased all the symptoms, with a well-marked diphtheritic membrane covering the whole conjunctiva. A microscopic examination of it showed a fibrinous mesh filled with pus and mucous corpuscles, and young epithelia. The patient began now to complain bitterly, and insisted on stopping the medicine. I ordered it continued, with the effect of only very slightly increasing the inflammation in two more days. There now appeared a tendency to furuncular inflammation in the lids, necessitating opening at one point two or three days later, to evacuate the pus. At this period, the infusion was stopped, and a ten-grain solution of boracic acid was directed to be used freely. The inflammation rapidly subsided, and in four or five days had about disappeared. The conjunctival surface was now smooth and rather glistening, the cornea was almost totally free of vascularity, but uniformly opaque; and the patient, for the first time in many weeks, felt comfortable, and was able to sleep soundly. He was much encouraged, and so was I. No decided change in the acuteness of vision occurred, however, contrary to expectation. While the blood-vessels disappeared from the cornea, the infiltration remained. The eyes remained in *statu quo* after about the fifth day from stopping the infusion for about three weeks. The old trouble seemed to be now returning. There was a good deal of vascularity of the cornea and inflammation of the conjunctiva, with photophobia, lachrymation and ciliary neuralgia. I again put him on the jequirity, used as before. From the first, he said it felt soothing, and in twenty-four hours he experienced much relief. This could not well be attributed to the moisture, since he had been freely using water to his eyes previous to the treatment without such relief. The inflammation now began to assume a muco-purulent character, without at any time forming a diphtheritic membrane. By the fifth day, there was considerable œdema of the lids, with a free muco-purulent discharge from the eyes. The jequirity was now discontinued, and only cold water used on the eyes. The inflammation as rapidly subsided as under the boracic acid, the vascularity disappeared, and in a few days the conjunctiva was smooth and glistening. The cornea began clearing, and up to this time, about ten days from the leaving off of the infusion, vision has improved from mere perception of light to counting fingers at arm's length, with a steady and quite perceptible increase of visual power from day to day.

Before the treatment the pupils were not visible through the opaque and vascular corneæ by oblique illumination with a condensing lens. Now the whole iris is distinctly seen by the same method.

The right cornea seems to be clearing equally with the left, but owing to the excessive alteration of curvature, but little practical vision can be expected with this eye.

There is now no photophobia or ciliary neuralgia, and the patient is quite comfortable.

How long improvement will continue and when stop, and whether the granular conjunctivitis will again return, remains to be determined. From the present smoothness of the lids one would infer the absence of danger of a return.

The short history of this method of treatment in this country does not yet admit of any reliable statistics on this point.

What the peculiar principle in jequirity is that causes it to excite a muco-purulent or diphtheritic inflammation of the conjunctiva, that so rapidly subsides when the remedy is stopped, remains so far a mystery. It cannot be an irritant, since it is perfectly bland when applied to the conjunctiva, and it is only after one or two days' constant use that any inflammation is excited by it.

The infusion is a slightly opaline fluid, with a very small quantity of flocculent sediment. It has a faint narcotic smell, but I have not adventured so far as to taste it. The microscope shows the sediment to consist almost entirely of masses of rod-shaped bacteria, while throughout the fluid they are found in considerable numbers.

After a few weeks, a peculiar fungus scantily develops in it.

The finding of the bacteria was somewhat startling to me, since Mr. Fingerhut had written me that the infusion would keep indefinitely; so I wrote him to know if they were peculiar to the fluid, or accidental, or, perhaps, *the active principle!*

In reply Mr. F. wrote as follows: "Your observations are in every regard corresponding with others, hence the theory that the infusion only acts as a *lymph*, or the transplantation of bacteria. I, personally, am of another opinion, and will surrender only when all results experienced are in favor of the bacteria theory. I have reports from different parts, and although unable to form a satisfactory judgment about the cases, it seems that the majority support the bacteria theory."

In examining the diphtheritic membrane and discharges from the conjunctiva I had expected to find the same kind of bacteria as in the infusion, if they were the specific agents in causing the inflammation, but I did not succeed after very close search.

Thus stands the subject to date. From reports coming in from the proceedings of medical societies, the trial of jequirity in granular conjunctivitis is being extensively made. It is to be hoped that in it we have a remedy for that most formidable and hitherto often irremediable condition of inveterate pannus and chronic granulation of the lids.

When its method of action has been established, and its clinical uses discovered, it may be found not to act injuriously on the healthy cornea, and may prove curative of granulations in the more recent stages, thus obviating the disastrous consequences so characteristic of granular conjunctivitis.

SUPPLEMENTARY REPORT ON THE USE OF JEQUIRITY.

The above paper has been three months in the hands of the publication committee, and during that time I have had under observation the patient submitted to the jequirity treatment, and up to this writing, September 4, his lids have remained free from granulations, and but for the staphylomata, which had occurred previous to the treatment, his vision would doubtless have been quite good.

Within this time I have also treated one other case with it which is deserving of a short notice. This time I procured some fresh beans and made the infusion myself, and began its use as soon as ready.

The effect was almost immediate, setting up a purulent conjunctivitis in twenty-four hours, with great pain and œdema of the lids. Patches of false membrane appeared on the conjunctiva in thirty-six hours, and by the end of the fourth day the inflammation had run so high, and the suffering of the patient was so intense, that the applications had to be stopped. Boracic acid solution and cold water were now freely used, but the pain and photophobia continuing, an examination was made to ascertain the cause, and to my chagrin I discovered that I had a case of iritis with strong pupillary adhesions to deal with. A six grain solution of atropine was immediately applied, which, in a few minutes, produced intense pain followed by great œdema of the lids. A two grain solution was then tried with similar result. About six hours' disuse of the atropine sufficed to restore the eye to its original condition, but another application was quickly followed by the œdema of the lids and acute ciliary pains.

The jequirity in this case seemed to render the eye susceptible to atropia, as it had been repeatedly used before with no untoward effects.

In this patient there was pannus of the upper half of the cornea, with a small, central, clear-cut corneal ulcer. The keratitis was greatly increased by the jequirity, and a small onyx was formed at the lower border from gravitation of pus. In a week after stopping the jequirity the infiltration of the cornea had disappeared, it was nearly avascular and quite transparent. The granulations of the lids seemed to be entirely removed, leaving them smooth and pale. At the present writing, the patient is nearly relieved of his iritis, which will leave some posterior synechiæ, on account of his inability to bear atropia. The other eye was not treated with the jequirity; as it had rather a deep corneal ulcer with but little pannus, I feared a diffuse keratitis, a fear which was perhaps well founded, seeing the effect on the eye that was so treated.

The question as to the active agent in the jequirity which excites the peculiar form of conjunctivitis, was well proven to my mind, in this instance, not to be bacteria. The microscope showed no bacteria whatever when beginning its use, and its effect was quicker and more powerful than the preparation formerly used, which was some days old and contained abundance of bacteria. The specific agent is evidently some principle in the licorice bean, and it remains for chemistry to separate it.

April 21, 1884.

As the foregoing reports have not yet appeared in print, I will bring down to date my experience with jequirity, and give an account of some experiments I have made with it in comparison with other infusions microscopically studied.

To state in general terms, without reporting special cases, I find that the grade of inflammation is proportioned to the strength of the solution, and the freedom with which it is employed. Of the strength commonly used, and as I have used it, constantly applied with compresses wet with it, the effect is quick and reaction high, running sometimes a violent course; but if dropped in the eye, or brushed on the everted lids, three or four times daily, it induces to only a mild croupous conjunctivitis, which may be kept up for a much longer time than by the other method, and with much less suffering to the patient and risk to the eye.

Some cases of purulent corneal infiltration and severe iritis have led me to regard the cautious use of this remedy important.

I have found in several cases a return of the granular conjunctivitis after one course of treatment by the De Wecker plan, but have found them amenable to a second course, after which I have so far known of no recurrence. The milder inflammation, longer continued, seems equally as effective, and perhaps more so, and is decidedly more tolerable to the patient.

It is best to instil atropine into the eye daily while under the treatment, to guard against iritis.

I now prepare the infusion by crushing three or four beans with pincers, and having put them in a two-ounce bottle, add water, and keep them in a warm room. In twenty-four hours this is ready for use, and this amount is sufficient to treat two or three patients. The bottle should occasionally be shaken, to insure mixing. The opaline supernatant fluid contains all the strength of the infusion.

The opinion entertained by many, that the peculiar effect of jequirity is due to a bacterium, has led me to investigate this somewhat. As is known, this bean belongs to the leguminosæ, and when crushed, or in infusion, has a striking narcotic odor, more or less possessed by all the species of this order.

By way of comparison, I prepared a two-ounce infusion of jequirity and several other kinds of beans at the same time, and studied them daily for some time. Here is the result:

INFUSION TWENTY-FOUR HOURS OLD.

Jequirity—A few active rod bacteria; strong narcotic odor.
Early English pea—No bacteria; no narcotic odor.
Marrow-fat English pea—No bacteria; no narcotic odor.
Large black bean—Numerous rod bacteria, with little motion; faint narcotic odor.
Large striped bean—Rod bacteria, some sluggish, some in active motion; faint narcotic odor.
Large flat white bean—Rod bacteria, a few sluggish, a few active; faint narcotic odor.

INFUSION FORTY-EIGHT HOURS OLD.

Jequirity—Bacteria multiplied considerably, some sluggish, some active; odor unchanged.
Early English pea—An occasional rod bacterium seen in slight motion; odor unchanged.

Marrow-fat English pea—No bacteria; odor unchanged.
Large black bean—A great abundance of rod bacteria, some active, some sluggish, some in zooglœa masses; odor unchanged.
Large striped bean—A great abundance of rod bacteria, some having many joints and forming chains; odor unchanged.
Large flat white bean—Myriads of bacteria, many actively moving, but the majority formed in clusters and zooglœa masses; odor unchanged.

INFUSION THIRTY-SIX HOURS OLD.

Jequirity—Same as last examination.
Early English pea—Myriads of bacteria and micrococci; odor putrid.
Marrow-fat English pea—Myriads of bacteria and micrococci; odor putrid.
Large black bean—Bacteria in great abundance, singly and in masses; odor somewhat disagreeable.
Large striped bean—Same as the black bean.
Large flat white bean—Same as the last two.

By the next day, the three bean solutions had become strongly disagreeable from the odor of decomposition, and were opaque with bacteria and micrococci. The jequirity continued the same from day to day, there being no increase of bacteria after forty-eight hours as long as kept, and at the end of two weeks it was free of any odor of decomposition, and retained without loss the characteristic smell.

The bacteria were now less active than when the infusion was fresher, scarcely moving at all and not very numerous, in fact, they were never numerous compared with the other infusions when thirty-six hours old.

In real warm weather, the infusion of jequirity takes on a faint odor of decomposition after several weeks. From my studies I infer that,

First. The specific action of jequirity depends on some property peculiar to the bean itself, and not to the bacteria, which accidentally develop in the infusion.

Second. There is a preservative principle in the bean which resists decomposition to a remarkable extent.

Third. The infusion of jequirity is inimical to the successful development of bacteria, and restrains their multiplication.

NEW ORTHOPEDIC AND FRACTURE APPARATUS—THE UNIVERSAL SUSPENSION SPLINT.

BY DR. W. P. VERITY, CHICAGO, ILL.

[Read before the American Medical Association, meeting of 1883.]

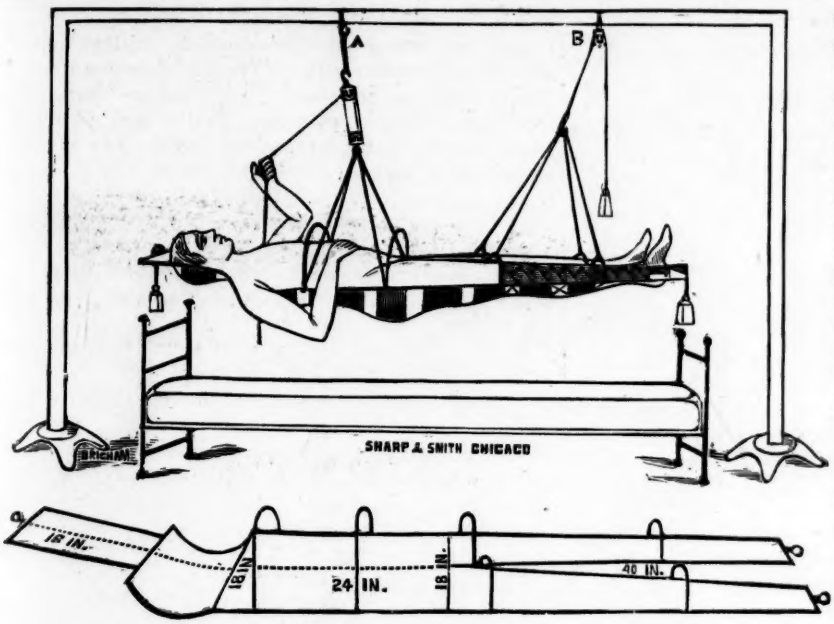
This splint can be made of gas pipe or rod iron; the first is preferable, and if it be used, one-half or five-eighths inch pipe should be employed for adults, and three to four-eighths inch pipe for children. The splint consists of a headpiece, body, extremities and arches. The arches over body should be made of material of the same size as the body of splint, and those over extremities of lesser size; arches should in all cases be twelve inches high. For children, one arch over the body and one over each extremity will be sufficient. If the adjustment be employed, the latter are unnecessary, as they interfere with its working. The dimensions may be arranged to suit the case. If the patient be five feet long, and sixteen inches broad across the shoulders, the splint should be sixty-six inches long, and twenty inches broad across the shoulders are all that will be necessary. Three sizes in practice to meet the usual emergencies.

Cut 1 illustrates the type of splint first made in 1880, which was made of rod iron.

Cut 2, the present form of splint, made of gas-pipe.

The adjustment is seldom deemed necessary, and the arm-rests at A, while convenient, can be dispensed with. The standard B, passing upward from the perineal portion of splint to a horizontal connection with the body arch, is indispensable, since it is needed to give strength to the apparatus and increased facility to the operator. As seen in cut 3, adjustment is obtained by having one joint inside of splint E, A, and one at the junction of the standard B with the rod I; the latter telescoping into the gas-pipe G, and is held at the desired point with set screw H, and this permits of any desired amount of abduction, as shown by the dotted lines. The foot-piece, of sheet iron, is constructed so as to slide upon the gas-pipe with but little friction. The rubber band, C, is tied to the foot of the splint into eyelet of set screw, which last fixes the foot piece at any desired degree of *inversion* or *eversion*. As the extremity is considerably wider at I than C, the foot-piece is easily removed by sliding in the direction of G. The foot-piece is rarely an absolute necessity.

In applying the splint, it should be suspended from the ceiling or a frame by compound pulleys, as shown in cut; common clothes line can be employed, and should be tied to the arches or sides in such a manner as to equalize the weight on the pulleys, and prevent undue strain on the joints of the splint; two compound pulleys are needed for adults; one will suffice for children. While the splint is being applied, the patient should lie on a mattress without pillows; the splint is placed over the patient without touching him at any point, and allowed to rest only on mattress. Strips of any firm cloth; canvas is the best, should now be passed under the patient, and the ends of the same should be fastened over the sides of the splint by stitches, pins, buttons or hooks. For the body it is best to use one piece, reaching from the coccyx to the cervical region. Care should be taken that the cloth is free from wrinkles. (The patient and splint should generally lie flat on mattress, and not remain for a long time elevated above it; a change of this kind rests the patient. A pillow may be placed between the head and the splint. If an extensive burn exists on the back, the patient can lie face downward on hands. If one leg only be injured, the other leg can be left free. In case the patient be of such a size as to render the splint unavailable, the mattress should be turned diagonally to the



Figures 1 and 2.

bed, and the splint applied; the bed should then be replaced by a cot). When this is done, the splint is applied.

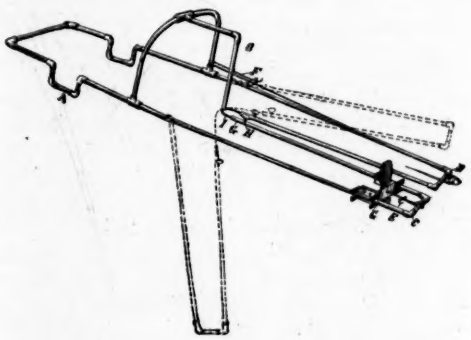


Figure 3.

The application of the splint is almost universal. Its chief recommendations are: The ease with which it is applied, whatever be the nature of the injury; its perfect safety; the comfort experienced by the patient in the ease with which his wants are attended to by any one, without disturbance to the injured parts; the readiness with which the surgeon can rearrange dressings independently of the situation of the injury; the ease with which the bed is cleaned without discommoding the patient. The band can easily be rearranged. In a complicated case, where extensive wounds or bed-sores exist, the patient should be placed on a cot, to secure convenient access on either side; he should be raised two feet above the bed; if now the bands require change and the patient needs washing, he can be supported temporarily, but firmly and securely, by passing two pieces of leather belting two inches wide diagonally under him, which cross at sacrum, and are fastened to the sides of the splint by hooks; thus all support can be removed, and the most extensive surface carefully dressed. This done, the dressings should be arranged on the bed in the desired order of application, and then the patient let down on them, the belting removed, and the bands of support applied as at first. An air pillow can be used, and any variety of dressing; a fracture box, plaster cast, or oakum can be attached to patient or splint in the most satisfactory manner.

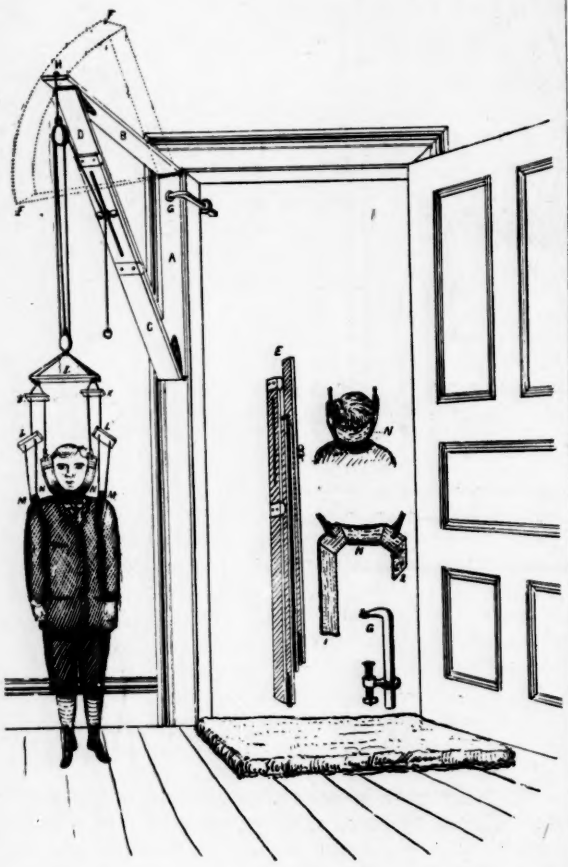
Extension of both extremities and head can be obtained when required. It can be secured by weight, pulley, rope and spiral spring, as shown in the following cut:

A, head part of splint. B, rope over the pulley D. C, block for adhesive plaster from lower extremity. E, body arch. F, scale indicating amount of extension. G, spiral spring. H, regulator of amount of extension. If marked counter-extension is required at the foot of splint, can be elevated with a compound pulley.

Surgical Uses.—These are numerous: In fracture of the vertebræ, pelvis, thigh, leg, or both lower extremities; resections of hip or knee; extensive burns or bed sores, etc.; operation for radical cure of hernia, it will be found of value, since the patient can readily be controlled in it.

Medical Uses.—In inflammatory rheumatism, paralysis, low fever, or any disease which renders the patient helplessly bed-ridden, and necessitates change of the patient for cleanliness, etc., the splint proves of great service.

A Derrick and Improved Suspension Apparatus for Application of Plaster Casts.—The original feature about the present is the derrick which is constructed of four hardwood strips, A, B, C, D, joined together in such a manner that the strips become parallel when folded, as indicated at E. The nature of the derrick can be ascertained from the cut. The strips should be three inches broad, an inch thick, and three feet long. In strips C and D is a slat, H, which permits of adjustment for any emergency, and is fastened with a thumb screw. The range of adjustment is indicated at E, F. The



strip B projects over D two inches, and at this point is a slat admitting a knotted rope at H, which serves for the suspension apparatus, rendering unnecessary the use of hooks, bolts, etc. This derrick can be used under almost every conceivable circumstance. It is attached by the clamp G.

THIS SUSPENSION APPARATUS, like other suspension apparatus, is used with a compound pulley, but unlike all other apparatus, is economical, easily applied, and does not incommode the patient, as there is no buckling connected with it. The method of adjustment is seen in the cut. The head piece is applicable to any person.

THE PORTABLE NATURE of the whole apparatus may be judged from cut above, which shows the whole apparatus arranged for transportation.

MEDICAL ETHICS.

BY DR. E. H. BOWMAN, ANDALUSIA, ILL.

[Read before the Iowa and Illinois Central District Medical Association.]

It is with great diffidence in myself that I presume to call the attention, and occupy any of the time of your honorable body, to the fact that, as a profession, we have a National Code of Ethics. The time was, in the not very remote ages of the past, when the profession did not have any code of morals, when every member was a law unto himself, and the majority seemed practically to adopt the Ishmaelitish tactics, involved in the patriarchal description of the progenitor of the tribe of Ishmael, viz.: "His hand is against every man," in the practice of the medical profession. As a consequence, the sense of justice, honor, and fidelity to truth (which nowhere on earth finds more fitting and appropriate lodgment than in the bosom of our profession), was, by the eternal law of self-preservation, compelled to obey the other eternal law of evolution, and formulate some of the most important principles involved by its relations with the world, and themselves, into a code of ethics. There may be men who call themselves doctors, who may be surprised to learn that the profession has any moral principles at all. And there are doubtless hosts in the outside world to whom it may be surprising news that there are any such ideas as justice, honor, and fidelity to truth, in the foundations of the temple of medicine. Let us glance for a moment at the field occupied by the science of medicine, for it is a fact that it has grown from the lowest plane of fetichism, with the grossest conceivable superstitions, into the magnificent proportions of a temple of science. Man, so far as we know, is the culmination of the great law of evolution on this planet. In him all lines of development meet and rise to the plane of the moral and spiritual being, with faculties to take in and comprehend his relations with the universe. He is the microcosm, in his own self-epitomizing the macrocosm. Our profession is the only one on earth that takes for its sphere this wonderful product of evolutionary force, in its

entirety. All other professions are limited and partial in their range and scope, dealing only with certain limited interests and faculties, in partial relation to the whole. Our profession comprises in its grasp every cause that operates on man from his lowest relations with the world of matter, up to the highest intellectual, moral, and spiritual developments and relations. There is no conceivable phase in the origin, development and termination of human life, that does not come within our sphere legitimately and necessarily. These premises being incontestably true, how apposite and indispensable, then, that we should have a code of ethics regulating or making law for all these multiform interests, in our relations with our grandest and holiest of all professions, with its members, and with all the dearest, most vital and sacred human interests and relations.

This Code of Ethics has been formulated by some of the best medical minds in the American Medical Association, and presented, with all the prestige and authority, and influence of the organization, for the acceptance, loyal adhesion to, and guidance of all worthy members of the regular medical profession. Every man who receives the degree of doctor of medicine from a school in affiliation with this highest medical authority in the nation, and for that matter in the world, is under the most binding honorable obligation to strictly conform his professional life and practice in harmony with the requirements of this Code. Let us take a succinct review of some of the leading features of our fundamental law, and see if there is any feature that a man of strict sense of justice, honor, or truth, can reasonably take exception to. And here we will say, that in our opinion, the framers of the code, while most earnestly honest and true in comprehensive regard for the dignity, integrity, honor and usefulness of the medical profession, yet were somewhat lacking in the faculty of order, and the proper or most correct sequence in treating of the profession, and its relations and multiform duties and rights. So we crave your indulgence in taking the liberty of departing somewhat from the order in which the subjects are treated in the Code, and take them up in such order as appears to us most natural and consecutive.

Passing over until we arrive at Article V, we come to the first attempt to give any definition of the profession. Section 1 of that article says: "Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue and artifice." This simple enunciation is far-reaching in its grasp, and goes deeply toward the eternal basis on which alone we can securely rest, and from which we can safely and surely contribute the master builder's share in the construction of "The Bridge of Precious Stones and Pearls," figured by that transcendant genius, the immortal Gœthe (whose prophetic and philosophic eye took in more than any other man had ever expressed, the full truth of the capabilities of man's development, and the relation of scientific truth thereto), in his wonderful allegorical production which he called "Das Marschen," or The Tale. This I believe he never explained during his life, perhaps for the reason that in his vast comprehension he saw that few, if any, contemporaneous minds were in the advanced stage of intellectual development to be capable of truly comprehending the truth, as from his intellectual mountain-top it clearly appeared to him. It begins to dawn, after these many years, on the advanced minds of this day, that the magnificent temple that was being formed in darkness and in the depths of the earth, and was gradually rising from "the dark profound," was intended to prefigure man in the glorious plenitude of his upward development, when the accumulation of precious stones (scientific truths) had builded the bridge which, like a celestial highway, spanned the chasms, rivers, and obstructions which imperfect development, ignorance and superstition had made or imagined in man's nature, with the "man with the lamp, whose clear radiance (reason) illumined everything on which it shone," bringing all the "disordered combinations" of soul-saving machinery into harmonious accord as ministrant servants in the upward progress of the temple where the whole world will one day worship, no longer feeling that man's nature is a wrong and a mistake, but one of the grandest notes of harmony in "the music of the spheres." And right here, at the risk of being considered in my old age a visionary enthusiast, permit me to express my profound conviction of the truth set forth in this strange form by one of the very few mountainous-minded men, whose summits pierce all the clouds of ignorance, superstition and imperfect development, and bask in the clear, eternal sunshine of truth. Man, as I said in the commencement, is the highest form of evolution known to us, or, to use a more trite form of expression, "the highest revelation which the Infinite has given of Himself on this planet; also to add my absolute conviction that the part our profession is destined to play in this grand march of humanity's upward progress will not be, cannot possibly be, a secondary one. Then, if such a destiny is before us; if we are so surely to have largely the formative hand in moulding the mighty agencies into shape, and the directing will to guide them into place, and the constructing skill to build the bridge, why should we not proudly raise our banner on high in the shape of a Code of Ethics as perfect, clean, pure and manly as human skill can formulate, and in view of the almost inconceivable magnitude of the interests committed to our keeping, and which are constantly damaged by unfaithful and recreant members, proclaim professional death to all traitors in our ranks. Why should we ever permit or sanction, or in any way wink at, the truculence which trails our grandest of flags in the mire, by joining professional hands with any of the harpies of empiricism, who befoul with falsehood every clean thing they touch? Every principle of honor and truth, it seems to me, must rise in indignant protest against such prostitution. There was in the camp of Israel of old, we are told, a character they called "Achan." He, I believe, was a Levite, and dedicated to sacred service, but he had an evil, selfish, thievish soul; so he pocketed the "wedge of gold," and filched the "Babylonish garment," which were set apart for sacred purposes, to enrich

himself and clothe his corrupt body with the rich vestments reserved for sacred use. He belonged, doubtless, to the "bread and butter brigade." We doubtless have numerous representatives of Achan in our camp, men who, like Esau, would sell their birthright, if they had any, or their soul, if they possess the article, for a mess of professional pottage. I believe, if my memory serves me, they on conviction of the traitor led him forth without the camp, and put him ignominiously to death by hurling rocks forcibly against his sinful body. Served him right. So should we be merciless. The greater the trust, the greater the crime of betrayal. The Israelites spared not the traitor who ministered in holy things. No danger of a Cincinnati mob there, exasperated to madness by the failure and perversion and debauching of all the machinery of law and justice. Swift justice is done on proof of guilt. The camp is secure and at peace, and those sympathizing with the recreant traitor, or having a proclivity of itching fingers, are at once put into a more wholesome state of mind. We should not spare even the tallest leaders. Oftentimes the more elongated the spinal extension, the weaker the column.

The age of superstition is not yet passed. Few, if any as yet, can truly say their emancipation is complete. Mankind are caught by the glamour of superstitious credulity, in the meshes of unprincipled charlatans, and are fleeced out of money and manhood. Shall we compromise with the many temporarily successful falsehoods, and be of the selfish, weak-kneed, truculent, timeservers, of the bread and butter brigade, who strike hands with empiricism? I think I can hear in every manly soul among us a most emphatic response, coming up from the manly depths of his soul, "No!" Like the dying Lawrence, rather even in prospect of defeat and death, who that is worthy would not prefer to join in with, and swell the strong cry: "Don't give up the ship!"

"Our country embraces Atlantic's wide crest,
And opens to sunset her gateway of gold."

Such width of space unavoidably gives room for wide divergence of views. It used to be the East and the West simply, but now what used to be *par excellence* the West, has become in our wonderful progress the center. From being the home of every ultraism in politics, religion, or medicine, it is rapidly evolving out of this conglomerate confusion the character of scientific conservatism. When the life of the nation was in deadly peril, and armed hosts of traitors were disputing its right to maintain its existtence, the same place that now aims to pull down our professional flag, and besmirch its immaculate folds in the mire and degradation of empiricism, then got up riots in opposition to the legal and just measures of our government for the preservation of its own life. Where then were Illinois and Iowa? Was the ear of treason ever tickled with the sound of a draft riot in Iowa or Illinois? No, a thousand times no. With lavish hands they poured forth a stream of regiments, that were not hireling mercenaries, but made up of their most priceless treasures, their own noble, heroic, stalwart sons. Their blood was shed in torrents on nearly every battle-field of the war for the Union. Iowa and Illinois clasped hands across the Father of Waters, and vowed that they would not cease the fight until its beneficent current should "flow unvexed to the sea." New York has the infamy of being the worst governed city in the Union, if not in the world. It did not succeed in stopping the war or draft. To-day it presents to us another rebellion of a most destructive nature, in the shape of a treasonable war on the Constitution of our National Association. Specious and plausible arguments are produced in profusion, as all treasonable movements are thus bolstered up, to show why one stone after another may not, just as well as not, be picked out and dispensed with from our constitutional underpinning. One by one they would pick them out with the soft, traitorous cry, "it is only a little one," until finally, if we permitted the treachery, we would find our foundation gone, and the grand temple of medicine swinging in the air at both ends, ready to fall in ruin over our heads. I much mistake the stalwart, conservative sense of the medical profession of these two central sister States, if they do not again clasp hands over "The Code of Ethics" in this treasonable war, which finds its greatest encouragement in the city of draft riots. Look over the field as carefully as we may, it seems to my view very difficult, if not impossible, to find any wrong features in the Code. There is absolutely nothing that an honorable, true man would be likely to take serious exceptions to. There is nothing but what is well calculated to impress a proper man with a just view of the sanctity and exalted character of the profession of our choice. Those who make war, however speciously, upon it, are in imminent danger of finding themselves in the exact category expressed by that eminent satirist, Hudibras, when he penned his famous couplet,

"No rogue ere felt the halter draw,
With good opinion of the law."

When a member unwittingly and ignorantly transgresses any of the principles of the Code of Ethics, he deserves admonition, counsel, and instruction. But when a member intelligently and wilfully violates any of the principles of the Code of Ethics, he should be as remorselessly cut off from honorable membership as we amputate a gangrened limb to save our patient's life. Instances have doubtless occurred, and may occur again, in which such reckless disregard of any honorable principle of action is exhibited, as to justify the conclusion of moral idiocy or absolute ignorance of the existence of any moral code. Perhaps if ever, by accident, they act as if from principle, they may be the subjects of the same surprise as was expressed by the witty John VanBuren, when in the campaign of 1848 he took the stump in New York in favor of free soil. At the close of a speech he was warmly congratulated by one of the ancients on having got hold of one of the great moral principles of the age, and most urgently advised to adhere to it.

"Ah, indeed," quoth John, "I am rejoiced to learn this, for by —— it is the first moral principle I ever have been charged with possessing, and I'll stick to it like a pig to a root."

There was hope in John's case, there may be in the erring if they will only "stick to it" when they have

found out or been instructed in a correct principle. Our profession is a liberal one, in that it is an open one. It has no concealments. It does not deal in, or tolerate patents or secret formulas. It is really and truly scientific. A host of earnest, patient observers and workers in its ranks for ages have been engaged in delving in the mines where the jewels are found, and little by little, by slow accretion, they have added each his mite, until our profession now finds itself on the threshold of the most advanced and exalted position of any human, or so-called divine profession. What additions to the domain of scientific medical knowledge have ever been made by any of the cloud of empirics that have hovered like vultures on the flanks and rear of our noble army of workers? Their only work is piratical. They have not a solid, valuable fact in their possession that they have not pirated from the accumulated stores of the regular profession. And with an assurance that might put brass itself to shame, they step forward with their stolen goods, claim to be educated in the groundwork of our profession, and claim fraternal recognition for the abnormal monstrosities they are busily engaged in palming off upon an ignorant and credulous world. Let the feeble knees shake. Let the weak spinal columns succumb. Let the bread and butter brigade desert, and meekly go over and make submission to the pirates that impudently demand their allegiance. We can afford to lose all these, and be stronger, cleaner, and better for the riddance. We can part with all these, and retain our honor unsullied. But to voluntarily lower our proud ensign, would be such a humiliating acknowledgment of weakness and defeat as would require many decades to retrieve us from the dire disgrace.

Our Code of Ethics tolerates nothing but truth. It entertains no false facts. To endeavor to carry a falsehood is well illustrated in the tale of "Sinbad the Sailor," who kindly undertook to carry for a while the poor, little, decrepit, worn-out, Old Man of the Sea. When the dwarf was fairly seated astride of the sailor's neck he clutched his benefactor's throat with the grip of a giant. It ended in a struggle for life. So with us—we cannot afford to part with a single principle of our Constitution. We may think this controversy in the East over the Code is only "a little tempest in a tea-pot," but to my feeble vision its portent is of vastly greater proportions. It looked to the superficial view as if the war would be over in ninety days when Sumpter was first fired on. But Sumpter fell, and the war raged over four horrible years of carnage. Yet, nevertheless, the nation did not die. In the defection in New York at the present time we may find our medical Sumpter. But, in that event, we need to gird on our armor here in the center, close up our ranks, and with lock step, shoulder to shoulder, present an unbroken front to the pirates and traitors who would haul down our flag. Instead of lowering our national ensign, we can better afford, proudly and defiantly, to write on its gleaming folds, in golden letters, Excelsior. Truth is mighty. The eternal years are hers. We claim to be sincere devotees at her shrine. In our eager quest for jewels in the mines of truth, it is not an uncommon thing to find a spurious stone, which puts on the deceptive appearance of a genuine gem. This may deceive the unwary, and pass for a time current on the world's exchange. Its course is always brief, like all counterfeit and spurious coin. The argus eyes of scientific experts soon fasten on it, and put it through the alembic of critical analysis, when its bogus character is clearly made known, and it no longer deceives any who wish to know and follow truth. But the world, in its still imperfect development, contains a large class of those characters whom Paul, in his inexorable theology, diagnosed and prognosed thus. Says he of them—"God gave them over to strong delusions, to believe a lie, that they might all be damned, because they knew not the truth (didn't want to know it, I suppose), but took pleasure in unrighteousness." This is pretty sharp criticism from a man who was founding a new dispensation. We, in the pity of our hearts, would prefer to be in sympathy with "Auld Scotia's favorite bard," in his "Apostrophe to the De'el," when he said "O wad ye tak a thocht an mend." Our profession is eminently scientific. Superstition is eminently unscientific; therefore there is an irreconcilable antagonism. This irreconcilable antagonism inevitably leads to an "irrepressible conflict." The hosts of empiricism, or unscientific medicine, are always ranged under the somber, gloomy folds of the banner of "the Giant," who, in "The Tale," represents Superstition. His power was always greatest when the light was weakest. So the course of empiricism is always flourishing in exact ratio with the ignorance or superstitious credulity of the community. Our calling seems destined to encounter, fight, conquer, and finally explode every form and phase of medical falsehood. This is in accord with a universal law in development which seems to require that every conceivable form of error and wrong, from want of conformity through ignorance, or departure through viciousness, should be demonstrated, that in the end mankind may intelligently and wisely choose and follow truth as the enduring good— the only safe, certain way to true, enduring happiness and prosperity. In conclusion, Mr. President and gentlemen, oppressed with a vivid sense of the magnitude and importance of my theme, I feel constrained to apologize to you for the very inadequate, hasty, and imperfect manner in which it has been presented for your consideration. I did at first intend to pass in review the entire Code, by article and section, but the more I reflected, the more it grew upon me, until I saw that a book would be required to contain all that might be, or perhaps ought to be said. So, in the brief space of a paper before you, I thought the presentation of the more general features might be more acceptable. With your kind permission I desire to state a few of the points I wished to take:

1. Our profession is the highest and holiest of any on earth.

2. That it brings us constantly into connection with the laws and vital forces of the universe.

3. That man is the highest product of those laws and forces.

4. That our profession includes for its field man in his entirety.

5. That it is necessarily required to investigate and understand every cause that operates favorably or unfavorably on man.

6. That in order to successfully perform the responsible duties involved, the highest scientific education attainable is imperatively required.

7. That as we are daily made the repositories of confidence in the most delicate and sacred of human relations, our profession is bound to a higher and more perfect standard of manly character than is required of any other profession.

8. That as our sphere is man in his entire nature, and we are thus brought necessarily into intimate connection and knowledge of the laws of his being, our profession is inevitably destined to take precedence of all other professions, and lead in the van of the grand army of human progress.

9. That humanity is perfect, and beautiful, and valuable, just in proportion to its absolute conformity to universal law in the conception, growth, and development of the human being.

10. That it is the mission of our profession to develope the knowledge of all the laws of man's organization, and teach them to all mankind.

11. That, under this teaching, the tide of humanity will rise higher and higher in the scale, until a nobler, more intellectual, a purer, better race, more efficient for all beneficent enterprise, will be developed on and dominate the earth, than has ever yet peopled and governed it.

THROMBALLOSIS.

BY GEO. N. MONETTE, M.D.

The phenomena typical of thromballosis (and embolism), in contradistinction to apoplexy, coincident with rupture of a cerebral vessel, are of a more pronounced and complicated character than those of apoplexy.

Although apoplexy, in the aged, may be more rapidly fatal, yet an embolism may complicate with diversified phenomena, and the patient may linger for a long time.

The differentiating feature being that in embolic cases the pressure upon brain tissue is from within outwards, but circumscribed by the limits of the dilated vessel, and not diffused over the adjacent tissue, similar to *extra-vascular*, as occurs when rupture of vessel takes place, thereby causing extensive circumjacent pressure and obliteration of cerebral function; often profound coma, or *bona-fide* apoplexy is caused.

We know that the predisposing cause of apoplexy is an atheromatous degeneration of the internal coat of arteries, *vice-versa*, in thromballosis the pathology is induced by an endarteritis or phlebitis, yet the inflammatory phenomena are really not acute enough to attract serious attention in some cases.

Very recently, several cases of thrombus and embolism have come under my observation and treatment, as I was able to interpret the symptoms.

Case. I. Will S., aged 23 years, a wild and dissipated character. Had had syphilis, but was treated some time prior to my attendance upon him. I found him with an acute diarrhœa, induced by drastics. Associated with this were aphonia and unilateral paresis, which yielded gradually to quietude and alkaline treatment (pot. iod.) Motive coördination was almost wholly regained after a fortnight. When acute unilateral facial paralysis and contraction developed, I added strychnine to the compound, with success.

In connection with the treatment of this series of cases, I must not overlook the inestimable advantages derived from the internal administration of ergotine. So, in the foregoing case No. 1, I ascribed much of the benefit acquired to the joint efficacy of ergotine.

Some weeks subsequent to the manifestation of the unilateral facial paresis and its relief, the young man developed violently insane and murderous features; intensely irascible and as suddenly humiliated, and ultimately morose and subdued. These paroxysms of insane violence (sometimes alternated by fits of immoderate laughter, conveying an hysterical nature) continued up to his demise, which was resultant upon an attack culminating in apoplexy. No post-mortem could be obtained. He survived his incipient malady about six months. Syphilis may have been a potential factor in the predisposition of such a lesion, superinduced by hypercatharsis. I have observed numerous developments of a similar nature with no specific taint.

Case II. Mrs. ——, aged about 31 years, mother of several children (all healthy); of prior good health. Catamenia regular; devoid of uterine disorders. She was addicted to the use of patent cathartics, and was suffering from the violent effects of the same when I was called.

I found her with an unilateral transient paresis, with loss of motion. Modified sensation. No perceptible diminution of surface heat or of temperature, save of podalic extremities. There was some contraction of the facial muscles, also an irrepressible disposition to alternately immoderate paroxysms of laughter and grief, resembling hysteria. In view of the pathology of the case, as I appreciated it, I adopted the *nihil* treatment for several days when, I ordered the following:

℞. Potassii iodidi.....3ij.
Liquoris potassi arsenitis...3ij.
Ext. ergotæ fluid.....
Tinct. Gentianæ āā..... ℥i.

Sig. Teaspoonful every 4 hours.

which was continued for several weeks, when she recovered sufficient strength to walk about with the support of chairs, railing, etc.

Her general health continued good for about a year, when I was called again. I observed a recurrence of the identical hysterical phenomena, with exaggerated sensations and some tingling in the affected side (left), which alarmed her. I ordered an enema of chloral (℥ss) potassii brom. (℥j) for the night. Upon my next visit I renewed the prescription for her former illness, which proved beneficial as formerly.

Case III. A gentleman was aroused during the night and found his wife in convulsions. I was called,

and saw her still comatose, yet emerging somewhat from the seizure, with an occasional respiratory stertor, and as often relapsing into an apparent respiratory indolence. I saw no hope for her recovery. She died within four hours. She was *enciente* (about three months). Her husband related that she used cathartics immoderately, with the consequent perversion of her assimilative energies.

I ascribe the phenomena of these cases to *hypercatharsis*, provoking malassimilation, anæmia, hydræmia, ultimating diversely in each case as above reported.

No. 285 Camp St., New Orleans.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

The Surgical Uses of Subcarbonate of Iron.—Dr. N. Timmermans (*Journal de Medicine, Bruxelles*) recommends the use of this agent in the treatment of constitutional and local ulcers, recent or suppurating wounds, and in erysipelas. He uses it in ulcers, by first washing the ulcer thoroughly with warm water, by lotions or irrigations, dries the surface with fine linen or charpie, and then covers the surface and borders of the ulcer with a layer (1 to 3 millimeters) of the powdered subcarbonate of iron, holding it in place by charpie, a compress and a bandage. The first few days it is renewed three and four times a day. If there is an abundant secretion, it mingles with the powder and forms a crust, under which the pus forms, and nullifies the action of the drug.

After several days of application, the ulcer, which had been pale, grayish, with a few vascular granulations or none at all, and furnishing a sanious, ichorous, fetid pus, in greater or less quantity, becomes changed in appearance; healthy pus shows itself, the borders which before were puffed out have now flattened out, and the base is filled with small, red, vascular granulations. A slight pellicle, like a delicate bluish line, appears along the borders, and invades by degrees, and by successive concentric zones, the whole of the loss of substance.

This application is ordinarily painless. But when the ulcer is the seat of a certain inflammation, the pain caused by its use becomes intolerable, and the inflammation must be subdued by the ordinary means before proceeding to its use. Sometimes this pain is due to impurities in the drug, such as sulphate of iron, and the sulphate and carbonate of soda. Varicose ulcers are the most painful on the application of this preparation, and the callous ulcers give the best results from its use, a cure being generally completed in from twenty-five to thirty days. The fungous ulcer also yields readily to treatment. The only cases in which there is absolute want of success, is in those where the ulceration of the subjacent derm is so advanced (scleroderma deuteropathic) that the conditions of the circulation have changed.

The powdered salt of iron, so applied, absorbs the pus, and exercises a certain degree of constringing power, which moderates or arrests the secretion. It is an excitant, acting like a foreign body; it modifies the atonic surface, stimulates and revives its vitality. But its prime force lies in its capacity for establishing an electrical current, and thus stimulating the ulcer.

On Bromide of Cadmium.—Dr. Roux (*de Brignoles*) has attempted to give bromide of cadmium for an antispasmodic in two cases of epilepsy. He records (*Marseille Medical*) the result as producing immediate and abundant vomiting. He used bromide of cadmium 5 grammes, distilled water 300 grammes; a tablespoonful as a dose. He naively says that he desired to try the medicine on himself, and took, as a prudent man, only a half of a coffeespoonful, when it produced as much upon him as if he had taken a grain of tartar emetic, which salt always has a very energetic effect upon him. His second case was that of a young girl, and he modified his prescription so far as to add bromide of sodium 5 grammes to the mixture, but the result was the same. In this case, however, there was no return of the epileptic attacks for six months.

Dr. Roux is content to class this drug simply as a very energetic emetic.

On Resorcin in the Treatment of Pertussis.—Dr. Moncorvo, of Rio de Janeiro, concludes an interesting article on this subject as follows:

1. Pertussis, the nature of which has been for so long a question for various interpretations, as regards its genesis, seems to-day to be ranked among the parasitic diseases, according to the latest clinical observations and microscopical researches.

2. The disease appears to be attributed to the presence of micrococci, which proliferate in great numbers on the mucous membrane of the supra-glottidian region of the tongue, by infiltrating the epithelial cells, which seem to be the seat of selection for their proliferation.

3. The resorcin applied directly upon the laryngeal mucous membrane, is successful in every case in which it has been employed in diminishing quite rapidly the number of paroxysms of coughing, which also lose their intensity, causing, in fact, after a short time a cure independent of all other medicinal agents.

Dr. Moncorvo employs concurrently the classic treatment of catarrh, when it is necessary, as ipecac, for example. But the painting with resorcin constitutes his true curative treatment. This is applied every two hours to the orifice of the glottis by means of a brush with a long handle.

The following is the formula used:

Resorcin, chemically pure.. 1 gramme.
Distilled water.....100 grammes.

From the numerous observations recorded by Dr. Moncorvo, it appears that the paroxysms of coughing diminish rapidly, and cease entirely in from twenty days to a month.—*Moniteur Therapeutique, Marseille Medical.*

THE HYPODERMIC USE OF KAIRINE.—Dr. Queirolo (*Gazzi degli Ospitali; Bull. Gen. de Therap.*) finds that kairine, used hypodermically, produces a more rapid, enduring, and greater lowering of the temperature than when taken internally.

To obtain this result the kairine is not required in as large or as frequent doses as when taken internally.

The hypodermic administration is exempt from any general inconvenience or local disturbance.

ON THE TREATMENT OF SYPHILIS BY THALLIUM.—Dr. Rabuteau having published in his last, fourth edition (1884) of his *Traité elémentaire de therapeutique et de pharmacologie*, some references which were favorable to the use of this new drug in syphilis; as he used it in the form of an iodide and in one fifth the dose of mercurial iodides, Drs. Pozzi and Courtade, of the Hopital de Loureine, who were associated with Rabuteau in attemping to utilize the drug, give their views, based upon eight cases, as follows (*Gazette Medicale de Paris*):

1. Iodide of thallium is an alterative.

2. It has produced a certain degree of amelioration in syphilitic affections, but this relief might also, with propriety, be attributed to proper attention to hygiene, etc.

3. It becomes absorbed into the system, as is shown by the alteration of the gums, and its presence in the urine.

4. Mercury remains in the first rank in the treatment of syphilis, and thallium takes its place far behind it, even if the relief afforded can be attributed to it.

ETHERIZATION BY THE RECTUM.—M. Daniel Molliere (*Lyon Medical*) relates that for the idea of using ether in this way, he is indebted to Dr. Axel Tversen, of Copenhagen, who, upon being shown around the Hotel Dieu by him, asked what anæsthetic was preferred, and whether it was used by the mouth, or by the rectum. Struck with the remark, and its explanation the next day, M. Molliere applied ether by the rectum with the aid of a double-tubed flaçon and Richardson's atomizer in the case of a girl of twenty years of age, to assist in the removal of a tumor in the parotid region. Ten minutes passed before she showed any signs of absorption of the drug. Then she said that she tasted the ether very decidedly, and her breath gave a marked ether odor. She began to hesitate in her speech, and a few drops of ether being applied to the nose, she fell into a profound sleep. The quantity of ether absorbed was insignificant. The patient having taken a plate of soup before its use, vomited in consequence, on her awakening, but there was no fatigue or nausea following.

A second case was that of a woman, forty years of age, etherized for the removal of a tumor filling the antrum of Highmore. A rubber tube of the size of the finger was introduced into the rectum and connected with a vessel of ether, which was placed in another vessel filled with water at about the temperature of 122° F. The ether entered in ebullition, and in about five minutes the patient came under its effects, with a marked ether odor from her mouth. A few grammes of ether on a sponge, applied to the face, produced complete anæsthesia. There were no bad effects on awakening, no nausea or vomiting; only a slight excitation common with ordinary anæsthesia.

The third case was that of a robust girl of nineteen years, who suffered from a necrosed phalanx which had to be removed. She, lying upon her side, talked freely and pleasantly while the ether was bubbling up in her rectum. Presently she stopped talking, closed her eyes, and slept peaceably, and the operation was performed. The ear applied to the abdomen heard the crepitus of the bubbles of ether. The nostrils exhaled an odor of ether. The awakening was perfectly natural. The quantity used was about ten grammes.

The fourth case was a robust man, to be treated by stretching the sciatic nerve. He had been a soldier for twenty-five years, and was in the habit of drinking his quart of white brandy daily. His anæsthesia was complete, without any period of excitation, which is remarkable in an alcoholic subject.

Two other similar cases are recorded, and M. Molliere considers that this mode of administering ether is destined to be of great service, in suppressing the period of excitation, in allowing of an exactitude of dosage, in reducing the quantity to its minimum, and in giving great freedom to the surgeon in operations upon the face.

OBSTETRICS AND GYNÆCOLOGY.

ON THE USE OF SULPHATE OF COPPER IN OBSTETRICS.—Dr. A. Charpentier, in a communication to the Paris Academy of Medicine (*Archives de Tocologie*), refers to the comparative value of certain medicinal agents in the antiseptic treatment of confinement, such as carbolic acid, bichloride of mercury, salicylic acid, permanganate of potash, chloral, etc., etc. The object to be attained is to find an agent that will fulfil certain conditions, such as:

A decided antiseptic, of ready preparation, not causing any risk to the woman, any danger of intoxication when administered for a prolonged period of time; its management easy and inoffensive to the patient, physician, or attendants; not injuring linen, cloths, napkins, etc.; if possible, inodorous; and, finally, of a moderate cost.

Of these substances, carbolic acid is no longer used by the French obstetricians. The sublimate is the agent most used to-day in the lying-in hospitals. This latter agent has decided advantages over carbolic acid; it is without odor, and its antiseptic action is much more energetic, but it has its inconveniences and dangers. Carbolic acid, to be really of use as an antiseptic, must be given in strong solution, and in addition to the disagreeable odor, which is offensive, it may be also dangerous. All obstetricians have noticed, after seven or eight days of continued use of solutions of carbolic acid, erythemas,

and vulvar and vaginal lesions, which render them painful to patients; but we have the further testimony of a number of surgeons to show that the absorption of carbolic acid may produce symptoms so serious as to endanger the lives of patients.

Corrosive sublimate is naturally preferred to carbolic acid from its want of odor and its ready solubility in alcohol and chlorhydrate of ammonia. But it has also its objections; it irritates the skin, which becomes as hard as if tanned, and it is frequently badly tolerated by patients in whom it produces pain, erythemas, and very marked eruptions upon the genitals. Eight cases are referred to, in one of which it was thought that erysipelas of the arm existed, another case was affected with gingivitis, and in another, a case of Stadfeldt's, the death of the patient was attributed to an intra-uterine injection of a solution of sublimate, 1 to 1,500.

Sulphate of copper, Dr. Charpentier tells us, he was induced to try, after learning of the laboratory experiments with that agent by Pasteur. The solution used was a 1 per cent. heated to a temperature of 96.8° to 100.4°, applied as follows:

1. During pregnancy, all the women in the waiting wards who presented any symptoms of leucorrhœa, however slight, received each day one or two vaginal injections. Not one of the children born of these women showed any signs of ophthalmia. Every student who examined or handled these women, first washed his hands in the solution.

2. During labor, every student or midwife called to direct the labor was required, after a careful washing of the hands with soap and use of the nail brush, to wash the hands with the copper solution before making an examination. So long as the labor lasted, the woman was submitted, every two or three hours, to a vaginal irrigation with the copper solution. This was the morely strongly insisted upon in cases of premature rupture of the membranes, of dead and macerated fœti, malpresentations, etc. All manual or instrumental interference was always preceded by a copper vaginal injection, and a washing of the hands and instruments with the same.

3. During delivery. If the delivery was natural, it was followed by a single vaginal injection, and left to the ordinary treatment. In four cases of incomplete abortion where the membranes were retained, and septicæmia was threatened, the copper solution was used in vaginal and intra-uterine injections, with the result in each case of a complete, rapid and radical cure. In three of these cases the temperature descended in twenty-four hours, from 104° to normal, and the pulse returned to its normal frequency after three injections. In one case it required five intra-uterine injections to produce the expulsion of the contents of the uterus. Once the first injection produced suddenly uterine contractions and a marked hæmorrhage. Again, the fourth injection was followed immediately by a nervous attack with almost complete loss of consciousness, paralysis of the tongue, and contraction of the limbs, but this could not be attributed to the sulphate of copper alone, for the same symptoms occurred in another patient, some time previously, after the use of a solution of the sublimate. In the cases of delivery at term, each patient receives afterwards a vaginal injection, which is replaced by a uterine injection in those who have undergone any manual or instrumental operation, where labor has been prolonged, who have been delivered of dead or macerated fœti, where the amniotic fluid is colored by the meconium, and in cases of malpresentation. In one case where free hæmorrhage occurred after delivery, one vaginal injection, followed in a few moments by a tampon of wadding soaked in the solution, stopped the flow. Another case of hæmorrhage which had resisted the use of ergot and hot water injections, was checked instantly by a cold uterine injection.

4. During the confinement which follows delivery. Here, if everything is regular, the application is restricted to washing the vulva at least four times in twenty-four hours, and the application of a compress wet with the solution to the genital organs. If there occur, however, the slightest signs of infection, chilliness, elevation of pulse, of temperature, tendency of the lochiæ to become fetid, or sensitiveness of the abdomen, the vaginal injections are used; if at the end of several hours no relief is afforded, intra-uterine injections are used.

This vigorous application of antiseptic treatment followed 12 deaths out of 397 labors within six months, which were attributed to septicæmia; for a month afterwards, under the use of carbolic acid, the mortality was suppressed, but slight phlebitis, phlegmasia alba dolens, and ophthalmias in the newly born, showed the existence of a morbific influence; then three women died, one after the other, within a space of five days. The sulphate of copper treatment, as detailed, was then established, and kept up for three months in 212 labors, with no deaths and no complications worthy of note. Whether used as a vaginal or intra-uterine injection, the solution of sulphate of copper never produced any pain, immediate or consecutive, even when there existed vulval or vaginal erosions. In one case, through a mistake of a pharmacist, a ten per cent. solution was employed without any discomfort. Dr. Charpentier sums up his conclusions with regard to it as follows:

1. Sulphate of copper in 1 per cent. solution, is an antiseptic of the first order.

2. It combines astringent and coagulating properties, and may yet be substituted as a hemostatic for the perchloride of iron, over which it has the advantage of not soiling the linen.

3. Its use may be continued through the first eight or ten days following delivery, repeated frequently during the twenty-four hours, without other effect than a rapid amelioration.

4. Surgeons especially should test this antiseptic, which, in a number of cases, particularly in one of voluminous thrombus of the vulva, assisted in a rapid cure without the discharge of any pus. In one case of fetid abscess of the urethro-vaginal track, it suppressed in twenty-four hours all the fetidity and general symptoms of putrid infection, which carbolic acid solutions had failed to do.

SURGERY.

FIBRO-PLASTIC CANCER OF THE PENIS.—Dr. J. Lopez Alonas (Correo. *Medico Castellano*, Madrid) reports this case as occurring in a priest, 58 years of age, of a sanguine temperament, excellent habits of life, and with no hereditary antecedents. For about six years, the tumor, of the size of a grain of corn in the beginning, developed by degrees until the penis disappeared almost entirely, showing in its stead a rounded tumor of the form and dimensions of a cauliflower, formed by little soft lobules, adherent to the deeper parts of the organ, and separated from each other by a soft substance. The penis served as a peduncle to the tumor, which presented deep ulcerations at various points, with indurated edges that bled freely and discharged an abundant quantity of a thick, grayish, purulent fluid of a fetid odor. The meatus urinarius was found at the inferior portion of the neoplasm, and the urethra was not ulcerated. The amputation of the penis at its root was effected by the linear constrictor—the urethra being protected by a rubber sound—to prevent its narrowing during cicatrization, which took place within ten days after the operation without any serious drawbacks. The detached tumor weighed 972 grammes.—*Revue Medicale.*

A CASE OF NECKLACE SWALLOWING.—Dr. Dujardin (*Journal des Sciences Medicales de Lille*) records the case of a child seven years of age which swallowed a necklace of steel beads, weighing about 17 grammes. The interesting part of the case consisted in the perfect detection of the location of the necklace by the use of the induction balance. After placing one of the two groups of bobbins at different parts of the abdomen, the telephone responded only over the region of the stomach. The response was very feeble in the neighborhood of the umbilicus, but attained its maximum of intensity at the left hypochondriac region, over the great pouch of the stomach. There seem to have been no bad effects from the accident. For several days the stools were very black, but they soon resumed their normal color, due probably to the fact that the beads were covered by a layer of mucus which prevented their direct contact with the gastric juices and alimentary substances.

MEDICINE.

HEAT AS AN ANÆSTHETIC IN BURNS.—Dr. Silverio Dominguez (*Anales del Circulo Medico Argentino*) finds that when small superficial burns, such as often occur upon the fingers, are approached as closely as possible by the body which has produced the burn, or by a lighted match, which is kept there for a time, the pain ceases. The pain increases very much for a moment, and then ceases entirely. In these burns there is an instantaneous elevation of temperature, which is not sufficient to produce a disorganization, as it hardly produces an effacing of the wrinkles of the epidermis, but it increases the sensibility to the amount of positive pain by the irritation of the peripheral nerve extremities. Under these circumstances, the close approach of a heated body increases the pain greatly for the first few moments, and then, having arrived at its maximum, the pain disappears, and nothing remains but a sensation analogous to that of a foreign body, which is probably due to the slight modification undergone by the cutaneous surface.

The sensations of contact, and of pressure, are placed on a scale better graded than the thermic sensations. By increasing contact, pressure is produced which, to a degree, produces pain, in consequence of an alteration or disorganization of the nervous extremities; this pain disappears on the increase of the pressure. Undoubtedly, a very low temperature would produce the same effect, but it is not so readily applied. We may say, then, that the pain of a burn may be made to disappear by the application of heat or cold, and that the pain from a similar lesion produced by low temperature may be made to disappear in the same way.—(*Revue Medicale.*)

A READY MEANS OF DETECTING ALBUMEN IN THE URINE.—M. Hoffmann (*Semaine Medicale*) has strips of paper prepared for this purpose, by dipping them into a mixture consisting of a solution of corrosive sublimate 1 to 20 parts of water, and iodide of potassium 1 to 2 parts of water, in equal quantity. When dried, the paper can be carried to the bedside, and dropped into the specimen of urine, and if albumen be present a precipitate will immediately follow. To produce this reaction the urine must be acid, and to make sure of this, a strip of paper which has been soaked in a solution of citric acid is first placed in the urine.

ON THE TRANSMISSION OF TUBERCULOSIS BY MILK.—Either the recent experiments made by the inoculation of various substances in connection with the germ theory of disease, are making wonderful and rapid strides in advance in medicine, or many of us are being greatly deceived. M. H. Martin (*Jour. de Med. et de Chir.*) thinks he has demonstrated by a series of inoculations of milk in guinea-pigs, that the milk ordinarily consumed in Paris is susceptible of communicating tuberculosis. Out of nine inoculations, three were positive in this result, and he advises that milk be always boiled before using. But he considers that when taken into the alimentary canal, a lesion is necessary to admit the entrance of the morbid germ.

LUSK says: "The indiscriminate use of intra-uterine injections has been followed by an increased mortality invariably." He refers to their use in the puerperal state.—*Detroit Lancet.*

IT is stated that among the Piute Indians a doctor who loses three patients, one after another, is shot by the tribe. There is some encouragement for medical men there to exercise all their skill.—*Detroit Lancet.*

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MAY 17, 1884.

GROSS, SAMUEL D., M.D., LL.D., of Philadelphia, was born near Easton, Northampton Co., Pa., July 8, 1805; died at his residence in Philadelphia, May 6, 1884. His literary and classical education was obtained at the Wilkesbarre Academy, and the high school, Lawrenceville, N. J. Having selected medicine as the pursuit of his life, he began the study of it in his native place with Dr. Joseph K. Swift, and subsequently for some two years he was a student in the office of Prof. George McClellan. After attending the usual course of lectures in the Jefferson Medical College, he received the degree of M.D. in 1828. Dr. Gross began practice in Philadelphia; he was fond of study, industrious, and stable in his purposes, and being resolved to succeed in his profession, occupied his spare time in extending his medical researches and in editing or translating medical papers and works from the French and German. He published in 1838 a work on "General Anatomy," and "Operative Surgery," in 1829; in 1830 "Anatomy, Physiology, and Diseases of the Bones and Joints," in which adhesive plaster is recommended in making extensions; shortly after, a small work on obstetrics, and a work of much value, based on experiments and original observations, "On Wounds of the Intestines." Work on "Elements of Pathological Anatomy," which was the first work of the kind in the English language. A paper on Foreign Bodies in the Air Passages was published as early as 1850. Dr. Gross early established a reputation for close and accurate observation with a comprehensive knowledge of anatomy and pathology.

In 1833, he was invited to become Demonstrator of Anatomy in the "Medical College of Ohio," at Cincinnati. After filling the position for two years, he was elected to the chair of Pathological Anatomy in the "Cincinnati Medical College." He delivered the first course on "Morbid Anatomy" ever delivered in this country. After a residence of four years in Cincinnati he removed to Louisville, Ky., where he resided and practiced his profession with increasing reputation. He had been elected to the chair of Surgery in the "University of Louisville." Here was the theater in which his great powers were brought prominently before the profession and gained a wide and appreciative recognition. In 1850, on the retirement of Valentine Mott from the chair of Surgery in the Medical Department of the University of New York, Dr. Gross was elected to the position. He delivered one course of lectures, but at the solicitation of his former colleagues, he returned to his previous position in Louisville. In 1856, when the failing health of Prof. Muter induced him to retire from the chair of Surgery in the Jefferson Medical College, Prof. Gross was elected to the position, and he returned to his native State. For one-quarter of a century he filled the position in the most satisfactory manner and with increasing reputation, and the advancement of the popularity of the college. Admonished by increasing years, in 1882 he retired from the chair of Surgery with the best wishes of the Trustees and Faculty, and had the satisfaction of seeing his son inducted to the position. Although a pleasing lecturer, and an excellent teacher, which accurate knowledge and a good address enabled him to use with effect and rare ability before a class, and in the operating room, still it is probable that his fame will rest largely upon his high moral character and his operative skill and literary labors, rather than upon that of a teacher. It is probable that his system of surgery, which he has revised and enlarged, is to-day the work of the highest authority on surgery in this country. Prof. Gross has received the highest honorary testimonials and honors from foreign universities, from Oxford, from Cambridge, and from the University of Edinburgh, in Scotland, and from other foreign societies and institutions of learning. He has also been equally honored by the scientific, literary and medical institutions throughout the United States. In 1867 he was elected President of the American Medical Association; in 1870, President of the Pennsylvania State Medical Association; and in 1876 he was elected President of the International Medical Congress, which met in Philadelphia that year. Prof. Gross was largely influential in founding

the Pathological Society of Philadelphia, the Philadelphia Academy of Surgery, and the American Surgical Association. He was a member of the Philadelphia College of Physicians and the Philadelphia County Medical Society. It would fill pages to enumerate all the societies to which he belonged. He was a warm supporter of medical organizations, and attended meetings of the American Medical Association in 1858, 1866, 1867, 1868, 1870, 1872, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881 and 1883.

Prof. Gross was popular with the profession, and widely known throughout the United States and Europe. Scarcely a foreign medical man of note visiting America but paid his respects or brought letters of introduction to Dr. Gross. He was hospitable in the highest degree, social and entertaining. At his table and in his parlors were to be met on almost any day the notables in social and professional life. He retained to the last his relish for society and his power of literary work. Within a day or two of his death a paper of his, "On Wounds of the Intestines," was read in the American Surgical Association by his pupil and friend, Prof. Richardson; and another, after his death, before a Section of the American Medical Association, by Prof. Theophilus Parvin. An autopsy was made, in obedience to an oft-repeated injunction to his children, that the cause of death might be obtained beyond a question. He also left a request that his remains should be cremated, which injunction was respected, and the incineration accomplished at the Lemoyne furnace, in Washington county, Pennsylvania, on the 8th of May, 1884. Funeral services were held at his residence before the remains were sent to the crematory. The ashes of Prof. Gross were taken to Woodland Cemetery, and laid by the side of the remains of his wife. Dr. Gross leaves four children, two sons and two daughters. His sons, S. W. Gross, M.D., and A. Haller Gross, Esq., of the Philadelphia bar. His daughters are married, one to Dr. P. J. Horwitz, ex-Surgeon-General of the United States Navy; the other to Benjamin Horwitz, Esq., of Baltimore. As the duty of preparing a proper memoir of Prof. Gross has been referred to a committee by the American Medical Association, this hasty sketch is presented for immediate use, to answer the expectations of the readers of the JOURNAL. J. M. T.

THE THIRTY-FIFTH ANNIVERSARY MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—This truly representative organization of the medical profession in our country, closed one of its most successful and enthusiastic annual meetings in Washington about 1 P. M., on Friday, May 9, 1884. It was successful in the unusually large number in attendance, there being more than 1,200 regularly registered members present, including representatives from nearly all the States and Territories of the Union. It was eminently successful in the amount and quality of work done. Through the active interest of the President of the Association, the repeated notices and explanations in the JOURNAL, the officers of most of the Sections had been induced to act more directly in concert with the Chairman of the Committee of Arrangements in securing an ample supply of good papers for each Section, with more systematic and interesting provisions for discussion, than at any previous meeting. If there was any exception to this remark, it was the Section of State Medicine, which appeared to have very few papers on its programme. The principal defect in the general preparation of the programme, was in not completing it in time to have it published in the JOURNAL, at least two or three weeks before the time of meeting. The By-law of the Association requires that the Chairman of the Committee of Arrangements shall be notified of the title and general contents of all papers intended for presentation in any of the Sections on or before the first day of April of each year, for the express purpose of enabling him to have the programme ready for publication sufficiently in advance of the meeting, that members may be prepared to consider and discuss intelligently the papers presented in every Section. Through the prompt and persevering activity of the Chairman of the Section on Practical Medicine and Materia Medica, the programme for that Section was completed and published in the JOURNAL three weeks before the meeting, giving not only an attractive list of papers, but the names of eminent men who would lead in the discussion of those deemed most important.

The result was, that the attendance upon this Section was full, and the most lively interest maintained in every session from the beginning to the end; while the other Sections, whose programmes were completed only in time for distribution at the opening of the meeting, had a much smaller attendance. The Chairman of the Committee of Arrangements used every legitimate means to induce those intending to present papers to send him notices of the same within the time specified in the By-law, but the dilatoriness of those who should be most interested in the matter, induced him to keep the programme open until the 24th of April, leaving only time to have it printed for distribution after members would be on their way to the meeting. The only cure for

this evil will be a rigid enforcement of the By-law requiring all who propose to present papers or reports, to forward them or their titles and contents to the Chairman of the Committee of Arrangements, at least *one month* before the time of the meeting of the Association. An active coöperation of the officers of the Sections will greatly aid in accomplishing this. The meeting just closed, was not only successful in the number of members in attendance, and the quantity and quality of the scientific and practical work done in the Sections, but equally so in the character of the general sessions of the Association. The Committee of Arrangements had performed its work with rare good judgment and ability; and the welcoming address of the Chairman, Dr. A. Y. P. Garnett, was eloquent in style, appropriate in matter, and judicious in length. The President, Dr. Austin Flint, so well known throughout the medical world as an eminent author and teacher, on taking the chair was received with enthusiastic demonstrations by the assembly, which closely filled both the large audience room of the church and the spacious galleries. As every one expected from his well-known ability, his address was admirable in its tone, appropriate in the selection of topics discussed, eloquent in its style, and dignified in the manner of its delivery. It was listened to with the most marked attention, and its recommendations promptly taken under consideration. The address in full, however, was given to our readers in the first issue of the JOURNAL after its delivery, (May 10), and speaks for itself. The allusion in the address to Prof. S. D. Gross was in perfect accord with the feelings of the audience, and when the dispatch came back from Philadelphia saying that the Nestor of American surgery had expired during the hour the address was being delivered, it caused a feeling of sadness to pervade every heart. The addresses of the chairmen of the several Sections so far as they were read, were characterized by a fair degree of ability; but their number and the length of some of them rendered it impracticable to have them all read in the time allotted to the general sessions of the Association, and allow time for the transaction of any other business of importance.

In consequence, three of these addresses were only read by title on the last day, and referred for publication. It is apparent that some change must be made in regard to these addresses in the future. Either the writers must be required to adhere strictly to the requirements of the By-laws, which would necessarily render them short, or their number must be reduced. But this topic, in connection with a proposed change in the mode of electing the officers of the Sections, will be referred to more at length hereafter.

The social entertainments were numerous and of the most attractive character. Besides several elegant private entertainments, the members of the Association, and those accompanying them, were cordially received on the first evening by the President of the United States in the Executive Mansion; on the second, an elegant banquet was tendered by the Medical Association of the D. C.; on the third, the Corcoran Art Gallery was illuminated and a reception given by W. W. Corcoran, Esq.; and on the fourth the members were very cordially received in the Capitol, which was illuminated for the occasion, by Senator Edmunds, President *pro tem.* of the Senate, and Mr. Carlisle, Speaker of the House, and at the Army Medical Museum by Surgeon-General Murray and his Staff. The place selected for the next meeting of the Association was New Orleans, and the time the last Tuesday in April, 1885. The full list of officers elected for the ensuing year may be found on the last page of the present number of the JOURNAL.

SOCIETY PROCEEDINGS.

PLASTIC SURGERY.

BY PROF. A. C. POST, NEW YORK.

At the regular meeting of the District Medical Society for the county of Hudson, at Jersey City, N. J., April 1, after the routine business had been disposed of, Prof. A. C. Post, of New York, delivered a very instructive and interesting lecture, illustrated by diagrams, paintings, drawings, and photos, showing the results in rhinoplastic, blepharoplastic, cheiloplastic and heteroplastic operations in *Plastic Surgery*. Prof. Post said: By this term is understood the branch of the healing art, which aims to supply deficiencies on the surface of the body, resulting from congenital malformation, from traumatism or from disease. The term plastic is derived from the Greek verb πλαστικος, —I form. Plastic operations consist in the detachment of flaps from neighboring or distant parts, and uniting them with the surface and edges of the vacant space which is required to be filled. The term anaplastic is sometimes employed, the prefix *a va* signifying up, and the term implying the forming or building up of the parts to their proper level. The term autoplastic conveys the idea that the transplanted parts are derived from the patient himself. The term heteroplastic signifies that the new tissue is derived from another person, or from an inferior animal. Blepharoplastic operations are those which are performed to repair defective eye-lids. Rhino-plastic operations are for defects of the nose. Cheilo-plastic,

for those of the lips. Prosoplastic, for those of the face in general.

In most of the operations for the repair of lost or defective features, the transplanted flap is left attached by some part of its circumference to the part with which it was naturally connected until it has acquired a vital union with the new parts to which it is artificially attached. The portion of the flap which retains its natural connection is called its neck or peduncle. There are three methods of transplanting pedunculated flaps, known as the Italian, the Indian, and the French methods. Plastic operations were performed by the ancient Egyptians, Greeks and Romans. In modern times Bianca performed a rhinoplastic operation in Sicily, in 1442. In 1597 Gaspar Tagliacossi, Professor at Bologna, published at Venice a book entitled "De Curtomm Chirurgia per Insitionem." In this book he gave a detailed account of his operation for the restoration of lost noses and other features. This book acquired a world-wide celebrity. The mode of operating consisted chiefly of the transplantation of flaps from the integuments of the arm, the hand being firmly bandaged to the head during the process of union. Fabulous accounts of his operations were published, representing the excision of flaps from a poor man nater, to supply the deficiency of a rich man's nose,a nd it was asserted that the vitality of the new nose depended on the life of the person from whom it was taken. A story is related of a nobleman whose nose was formed from the integuments of a Florentine peasant, and which retained its vitality for a number of years. Suddenly, without any obvious cause, the nose died and became a putrid mass. On inquiry, it was ascertained that the death of the nose coincided with that of the peasant from whom the material for its construction was obtained. Butler, in his Hudibras, alludes to such fabulous rumors, when he writes: "Thus learned Taliacotius from the brawny part of porteis bum cut supplemental noses, which would last as long as parent breech, but when the date of nock was out, off dropped the supplemental snout."

This mode of repairing defective parts by transplanting flaps from remote regions, is called the Italian or Taliacotian method. The mode of operating by transplanting flaps from adjacent parts, and twisting the peduncle so as to bring the flap into its proper position, is known as the Indian method, having long been practiced in Hindostan, and having been made known to European surgeons about the close of the eighteenth century. It had long been the custom of native tyrants of India to mutilate their rebellious subjects by cutting off their noses, and as "necessity is the mother of invention," the persons who were mutilated exercised their ingenuity in finding a remedy for the disfigurement resulting from the mutilation. The operation for this purpose was not performed by physicians, or surgeons, but by a class of artisans who were engaged in pottery. The Indian operation for the restoration of lost noses consisted in freshening the edges of the space from which the nose had been excised, and cutting a flap from the integument of the forehead, and twisting its peduncle so as to bring the flap into the position of the nose and fixing it so as to secure union with adjacent parts. The same principle is applicable to the restoration of other features besides the nose. The Indian operation of rhinoplasty was performed in London in 1803, but the first operation was unsuccessful. The first successful operation in Europe was performed in London in 1814, by Mr. Carpul. The operation has since been performed many times by surgeons in different parts of Europe and America. The resulting operation has been quite satisfactory, when enough of the original nose has remained to support the transplanted flap in its new position. But in cases in which the nose has been entirely destroyed, the new organ is an imperfect substitute for the old one, presenting a flattened or depressed appearance. But even in these cases, the new nose is a decided improvement on the cavernous depression which preceded its formation.

The French method of performing plastic operations consists in cutting flaps in the vicinity of the defective part, and gliding them into position without twisting the peduncle to any considerable extent. The Italian method of restoring lost features, by transplanting skin from remote parts, is now very seldom resorted to, except in those cases in which there is no available material in the immediate neighborhood. The Indian method is often employed, and yields very excellent results. In many cases, where the nose or the eyelid is the feature to be repaired, it is the only available method. The French method, by gliding the flap into its place, without twisting its peduncle, is the best operation in cases in which it is applicable, especially in supplying deficiencies of the lips and cheeks. The principal difficulty to be contended with is the tension of the flap when it is brought into its new position. This difficulty may, however, in most cases be obviated by giving a decided curve to the peduncle of the flap. In the performance of plastic operations, certain facts have been observed, to which it is proper to direct your attention. On making the first incisions the flap becomes pale, but afterwards the parts adjacent to the connecting medium assume a redder color. Dark bluish spots or streaks are often found scattered through the flap. Blood spouts at first from the arteries at the edges of the flap, and afterwards fibrine is effused. The flap contracts considerably, and is disposed to turn inwards; it also acquires an increase of thickness. These changes are most distinctly perceptible in young persons of healthy constitutions. The flap loses all sensibility, except at the extremity by which it is nourished, and even there the sensibility is but slight.

The flap should be one-fourth or one-third longer than the space which it is designed to fill, and a wide bridge should be left, connecting it with the adjacent part. The flap should contain not only the skin, but a considerable thickness of the subjacent parts, so as to afford a good vascular supply. It is highly important that it should be easily held in position, as any considerable tension will be likely to hinder its adhesion to the adjacent parts. In cutting the flap it is well to make a pattern of oil-silk, or other suit-

able material, of the size and shape of the space to be filled, and to use this pattern as a guide in making the flap. In fixing the transplanted flap in its new position, one or more pin sutures may be advantageously employed. These should include nearly or quite the whole thickness of the flap, and the points of entrance and the exit of the pins should be at least eight or ten millimeters from the edges of the wound. Numerous sutures of fine black silk should be employed to secure a perfect apposition of the edges of the wound. The spaces between the sutures should not exceed two or three millemeters. Black silk is preferable to white, as being less irritating and being more easily seen. The fineness of the silk is indicated by the letter O on the spools. In introducing the sutures, if the edges of the wound are of unequal thickness, the needle should be introduced more superficially on the thicker side. Before closing the wound, it may be freely irrigated with a solution of mercuric bichloride, eight grains to a pint. After applying the sutures, there is no occasion for applying bandages or plasters, but the surface may be freely exposed to the air. When the flap is congested, cold water dressings may be applied. On the ninth or tenth day all inflammatory swelling has generally subsided, and the cuticle cracks and peels off. When the flap has been taken from the hairy scalp, the hairs after a time will grow, and they may from time to time be plucked with forceps. The growth of hair may be diminished by the free application of lime-water, or a solution of mercuric bichloride, or the hair bulbs may be destroyed one by one by a galvano-cautery. In blepharo-plastic operations, when the eyebrow has been destroyed, it may be replaced by a flap from the hairy scalp, the hairs being allowed to grow over a space corresponding with the eyebrow, those above and below being plucked or destroyed. When I first restored the eyebrows in this way, I supposed that the practice was original with myself, but was afterwards informed that I had been anticipated by Dr. Pancoast, of Philadelphia.

To give proper shape to the newly formed feature it is often necessary to excise here and there small portions of the newly transplanted integuments. This may be done without hesitation, as wounds in recently transplanted integument heal by the first intention and with great rapidity, much more so than wounds in other parts. This observation was made by Dieffenbach, and I have often verified it in my own practice. When these wounds are allowed to granulate they bleed freely at first, and the blood is very bright and liquid. The wound appears pale, and the edges are scarcely inflamed; there is little or no suppuration, and the exuded blood forms a scale or scab, which after a while falls off, leaving the wound healed. When it becomes necessary to separate the edge of the flap from its new attachment, it never heals by the first intention, but always goes through a tedious process of granulation. Sensation is very slowly developed in transplanted parts. Many months, for example, elapse before a new nose transplanted from the forehead becomes sensible to pain. Sensibility is first restored near the line of union with the adjacent parts. The newly formed feature does not begin to perspire, nor to form thick pus when wounded, before twelve months. There is much difference in different cases in the power of withstanding cold possessed by the transplanted part. A patient, for whom Dieffenbach made a new nose, was attacked with jaundice eighteen months afterward. The whole body, with the exception of the nose, was of a deep yellow color. When the patient was warm the nose was white, when he was cold it was of a dark-bluish hue.

The treatment of cicatricial contractions is a matter of great importance. It is not safe to include cicatricial tissue in flaps which are to be transplanted, or to raise it to any considerable extent from the subjacent parts, as it almost invariably sloughs when it is so treated. But it may be freely divided, and a flap of healthy skin may be united with its divided margin with a good prospect of union by the first intention. It may be divided into narrow segments by incisions crossing each other at short intervals, and may then be put upon the stretch, and it will not slough if sub-based attachments be not interfered with.

Certain special modes of operating, which have been introduced by different surgeons, are worthy of attention.

Dieffenbach introduced an important improvement in treating the deformity occasioned by the loss of the nasal septum from syphilitic disease, and the sinking of the remnants of the nasal pyramid into the cavity. He made longitudinal incisions dividing the nasal pyramid into five strips, attached above and below, and raised them to their proper position, fixing them with pins and sutures.

T. Wharton Jones, in certain cases of ectropion, made a deep triangular flap, the base of which was formed by the margin of the everted lid, and bringing the margin of the lid into its normal position, caused the apex of the flap to recede widely from the part from which it was taken, converting the shape of the wound from the letter V to Y, and fixing the flap in its new position by sutures. This ingenious operation is applicable to other parts besides eyelids.

Burow, a German surgeon, introduced a new operation for certain deformities of the lips, in which there is a great deficiency in the lower lip and a relative superfluity in the upper lip, or *vice versa*. He took out a triangular portion from the diseased lip, the base of the triangle corresponding with the vermilion border, and extending on one side to the angle of the mouth, and extending the line of the base by an incision into the cheek, he excised another triangle, with its apex in the opposite direction, and uniting the opposite sides of the two triangles by sutures, restored the symmetry of the mouth, lengthening the shortened margin of one lip, and shortening the superfluous margin of the other.

In all cheilo-plastic operations, it is important that the margin of the newly-constructed lip should be invested with mucous membrane. When a flap has been transplanted from the cheek, the mucous membrane should be drawn over the margins and attached to the skin by fine sutures.

When there is no healthy mucous membrane for the purpose, the skin itself may sometimes be inverted over the margin.

Within the past fifteen years, a new mode of supplying deficiencies of integument upon the surface of the body has been introduced, viz.: transplanting thin portions of skin without peduncles upon recent wounds, or upon granulating surfaces, and maintaining them in position by plasters or bandages. The name skin-grafting, or epidermic grafting, has been applied to this process. It is somewhat analogous to the process of budding or grafting fruit trees. The practice was introduced by Reverdin, a French surgeon, in 1869. Reverdin was at that time interne in one of the French hospitals. He shaved off very thin portions of integuments of the size of a grain of rice, and applied their raw surfaces to the denuded or granulating surface of the part which he wished to invest with new skin. Close apposition was maintained for a number of days, and on removing the dressings, it was found that some of the grafts had acquired a vital union with the surface upon which they had been placed, and from each one of these points there was a radiated growth of new skin. This has now become an established practice in surgery, and it has become a valuable addition to our resources in cases in which there has been an extensive loss of skin. The practice has been modified by Lee, Ollier, and Poucet, who successfully transplanted larger portions of skin, in some cases larger than a silver dollar. In grafting portions of skin without peduncles, a very different course is to be pursued from that which is adopted in the transplantation of pedunculated flaps. Instead of including a considerable thickness of subcutaneous tissue, the part to be transplanted should be cut very thin, never including any subcutaneus tissue, and often including less than the whole thickness of the skin. This mode of grafting has the advantage that it can be applied where there is no available sound skin in the vicinity of the part which is to be restored, and that the new material may be obtained from parts of the body which are covered by clothing, so that the patient will not be disfigured by the cicatrices which follow the excision of the flaps. On the other hand, it has the disadvantage that it does not provide a flap of considerable thickness, such as is required for the restoration of the lips, where the skin must be lined with mucous membrane to perform its functions in a satisfactory manner.

The operation is a useful one under some circumstances, but it is not likely to supersede the transplantation of pedunculated flaps.

After Prof. Post's able discourse, the subject was thrown open to the Society for discussion.

Dr. Quimby remarked that the subject of plastic surgery belonged to that branch of the healing art which did not, as a rule, come under the notice or occupy the attention of the general practitioner. But it is a difficult, intricate, and important branch of surgery, and as we increase in population, and advance in civilization, it will, of necessity, become more important, and should engage the general attention of surgeons more in the future than it has in the past. Having paid some attention to plastic surgery, Dr. Quimby said he would like to make one or two observations:

1st. The reason, he thought, some surgeons failed in their plastic operations, was because there was not sufficient amount of care taken in relieving the affected parts operated upon from all tension. 2nd. He had witnessed one or two failures in these operations, because due regard, he thought, was not exercised in having the flap to be transplanted thick enough, and its peduncle large enough to preserve its vitality. When the flap is cut too thin, or the peduncle too small, and where there is too much tension, sloughing is sure to follow. A unanimous vote of thanks—of the Society—was tendered Prof. Post for his exceedingly instructive and valuable lecture, after which the Society adjourned.

J. A. EXTON,
Sec'y. Hudson Co. Dist. Med. Society.

CHICAGO MEDICAL SOCIETY.

Continuation of the proceedings *of the regular meeting*, April 21, 1884:

Dr. E. C. Dudley was to have read the report of a case of removal of a uterine myoma weighing 35 pounds. The patient was operated on five weeks since, and is gradually recovering. He promised to report the case to the society sometime during the next month. He would therefore report a case this evening in which he had operated to-day. The operation was for the removal of a cyst from the abdominal cavity. The specimen was presented for examination, and consisted of a polycystic tumor, of which the history is unique. The uterus and tumor were disconnected. Ten years ago the patient first noticed this tumor, when it suddenly disappeared. It developed again, and for years it has every three to six or sometimes eight weeks disappeared rapidly, followed, as the patient stated, by a very copious evacuation of urine; she would void a pint every half hour, amounting to a gallon or more in twelve or fifteen hours. It has ruptured repeatedly within the abdomen. Several gentlemen in the profession had been consulted by the lady before she called upon him. Such cases may very easily be confounded with hydronephrosis. There were in all fifteen or twenty cysts. The tumor was two-thirds as large as an adult head, and each cyst contained a yellow viscid fluid. The pedicle is small, and the operation of removal was easily effected. There are numerous cicatrices on the outside of the cyst walls, showing where rupture had occurred at different times, while on the inside there is developed a large colloid excrescence, which I here show you, although I have not examined it with the microscope. I am sure a histological examination would result in showing it to be an endogenous colloid growth. The development is not malignant.

In relation to its adhesions, no reliance could be placed on this, as there were no adhesions. In three hours after the operation the patient's pulse was 70, strong and full, and the temperature normal. The case shows that the fluid within the abdomen when

the sacs ruptured was innocent or non-irritant, and did not at any time induce peritonitis.

Dr. G. F. Lydston asked the author if he thought the colloid growth would be apt to return in another portion of the patient's system?

Dr. J. H. Etheridge asked if there were any communication between the cyst and bladder?

Dr. D. A. K. Steele reported a case of tumor occurring in a young woman, that disappeared spontaneously in a similar way as the one reported above. That it developed again, and he tapped it, when there was discharged clear ovarian fluid. He understood that it had filled again, and then disappeared the third time.

Dr. Dudley said the first question was an important and interesting one. He thought internal cancer, if thoroughly removed, is less liable to return than when removed elsewhere—by this he meant where the cancerous tissue develops within or internal to a cyst. If an ovarian tumor containing cancerous development is removed, neither will return as that of a cancerous breast is apt to do.

This case I have reported contains within the cystic wall colloid tissue. Had a cancer been without the wall, the history would have been quite different.

In answer to Dr. Etheridge, in none of the cysts was there any rupture communicating with the bladder. There was no solution of continuity or rupture or cicatrix of the bladder. Rupture of polycystic or monocystic tumors is not common, and this peculiarity occurring in the case which I have cited is the principal reason of my presenting it. When a cyst ruptures, the fluid is eliminated or absorbed, *i. e.*, the peritonæum will carry it off, and the fluid is not infectious in the least, as has often been demonstrated.

Dr. R. Tilley asked if the urine was examined microscopically? he was answered negatively.

Dr. Charles W. Purdy then read a practical paper, and demonstrated the reaction with the new urinary papers, for albumen and sugar in urine. These test papers were prepared by Parke, Davis & Co., and he thought were the most reliable of anything of the kind that had ever been presented. The following is an abstract of Dr. Purdy's paper:

After stating the very deep importance of additional light on the pathological condition of the urine, and the subject of urinalysis generally, the author proceeded to cite what is required from us by the leading life insurance companies in this direction, and furthermore, that the day is already dawning when no reputable surgeon can afford to employ the knife or chloroform without previous observation of the same precaution. The very ablest diagnosticians repeatedly overlook the presence of an interstitial nephritis, that may begin its march silently and stealthily, when the disease is yet within range of medication. The new method of investigation has practically revolutionized the old system of urine testing, and contains so many advantages over the old methods, that we are warranted in giving it more than a passing notice.

First, then, the four solutions—ferrocyanic, picric, iodo-mercuric, and tungstic, produce the most efficient tests in paper form. As all are very soluble salts, the papers can be heavily charged with each of these solutions.

Experience demonstrates that these tests possess the elements of rapidity, simplicity and accuracy to a degree not approached by the nitric acid or any method at present known, and the precipitates that any of these papers will produce, as Dr. Oliver observes, "in ninety-nine cases in one hundred are albuminous," and if *the one precaution alone of heating* afterwards is observed, the precipitate remaining *is positively albuminous.*

The mercuric iodide test first claims our attention as the most delicate of all, as an albumen precipitant. This test, in addition, is a most sensitive one for alkaloids, hence, if a patient is taking quinine, it will produce a haze in the urine, at first sight much resembling albumen, but the haze is a uniform turbidity in the case of the alkaloids when in the urine, *which does not break up into flocculi or settle to the bottom*, as in the case of albumen. Gentle heat will of course clear up this turbidity. The oleo-resin balsam copaibæ is not thrown down by mercuric iodide in the absence of an acid, but it precipitates peptones, if present in the urine, and is redissolved by heat.

Picric acid papers throw down alkaloids, also peptones, and occasionally urates, if present in the urine, the latter in excess. The picric, unlike the mercuric test, throws down oleo-resins, even in the absence of an acid, as a dense opacity; this dissolves on boiling, and reappears on cooling.

The tungstic papers differ from the picric and mercuric in the important particular that they will not cause precipitates with alkaloids, but, like the two latter, in the absence of an acid, they will not precipitate oleo-resins.

The ferrocyanic papers are likely to prove the most valuable of the series, being the least liable to error. So far as at present known, they throw down precipitates with no bodies usually met with in the urine save albumen and urates; the latter may be avoided by first diluting the urine with an equal bulk of water. This, then, is the only known test which will detect serum albumen in the urine positively without heat.

The citric papers accompanying these tests are destined to cover a wider range of utility than the mere previous rendering of the urine acid, and clearing up phosphatic turbidity. These test papers will also differentiate the forms of albumen in urine, whether it be serum albumen, or where it may be associated with an acid, or whether it may be associated with an alkali, (called alkali albumen). With such agents as the mercuric and tungstic tests, one part of albumen to twenty thousand (20,000) may be detected.

The mode of using the paper tests for albumen was then discussed, which evoked much interest from those present. Urine, if turbid, should not be submitted to any test if we expect to gain any accurate information. If the urine is not clear when voided, it should be filtered. If this does not clear it, a fourth of its bulk of liquor potassa may be added, then warmed and filtered. If still not perfectly clear, one or two drops of the magnesium fluid, (magnesia sulph.,

ammon. carb. āā parts i; aqua destillat, parts viii; liq. ammon. pur parts i), may be added, then warmed again and filtered. Then proceed with the suspected urine. Its reaction is first noted with litmus paper. Then the various procedures and steps are taken to ascertain whether albumen may be found with the above-named reagents.

In testing for sugar, all agents employed are either caustic alkalies, or bodies associated with an alkali. We may meet with a case of saccharine urine of exceptional acidity, rendering it necessary to add an extra paper of soda carbonate. Fehling's test becomes unreliable if kept too long, and all solutions used in sugar testing become unsuitable and unreliable. One of the tests for sugar is the copper test paper (made after the method of Trommer), and a soda carbonate paper; one of each are introduced into a test-tube containing 30 minims of urine, and heated to boiling. If sugar is present, the usual reaction will be observed.

Picric acid test papers possess the advantage that they may be used in testing for both sugar and albumen. Used with the soda carbonate paper, the picric, upon boiling with urine, assumes a dark color if sugar be present.

The indigo carmine test for sugar is the most striking and beautiful in reaction of any of these tests. When the indigo carmine is heated with soda carbonate and a solution of glucose or saccharine urine, the blue color is converted gradually into violet, then into various tints of red, and finally into yellow. This method is as follows: Place in a test-tube containing 30 minims of water a paper charged with the carmine of indigo, and one of the soda carbonate, heat till the indigo is discharged into the water, then add one or two drops of the suspected urine and apply heat. If sugar is present, the blue quickly changes to a violet tint. This in turn deepens, and passes into purple, which next shades into reddish purple, followed by various tints of red. These quickly merge into orange red and orange, and at last the solution becomes of a straw color, and the paper assumes a yellow color. The compass of this wonderful color reaction embraces all the prismatic colors save that of green, and their kaleidoscopic play before the eye of the observer in testing is one of most exquisite beauty.

It will be noted, on standing the tube aside, that these colors slowly return in the inverse order in which they appeared, especially in the upper part of the tube, which is due to reoxygenation through atmospheric contact. This may be hastened, as well as diffused through the whole tube, by constant agitation, or entirely stopped by filtering and corking the tube at any color. The tint reached in any particular case depends upon the quantity of glucose present in the urine. It may stop at any of the colors reached, but made to proceed to yellow by adding more glucose to the solution, *and upon this fact depends the working of the* QUANTITATIVE *tests for sugar in paper form*, which is deferred until another time.

In the discussion, Dr. G. C. Paoli spoke of the information on this subject that a writer advanced last year, and published in one of the British medical journals. I desire to state, also, that another test for albumen is in placing a crystal of metaphosphoric acid as large as a small pea in the suspected urine, and if albumen is present, will be followed by the usual reaction, and further, that a crystal of pure carbolic acid used in the same manner, is also a sure test for albumen. He had heretofore been content in using concentrated nitric acid, chemically pure, as a sufficiently reliable reagent for albumen, which is so well known as to not require further detail.

The hour being late, the society then adjourned.

L. H. M.

BOOK REVIEWS.

THE DISEASES OF CHILDREN. A Handbook for Practitioners and Students. By ARMAND SEMPLE, B.A., M.B.; M.R.C.P., London. Physician to Northwestern Hospital for Children. New York: G. P. Putnam's Sons, 1884. Pp. 352.

The small size of this work and the great extent of the subject it covers, has rendered condensation and brevity of style a necessity. It is true that the whole subject has been traversed in its pages, but in many instances in a fashion extremely unsatisfactory to the reader.

In the discussion of the diseases of the spinal cord and its membranes, all mention of *treatment* is omitted from the sections devoted to "spinal irritation," "spinal hæmorrhage," "myelitis," "spinal meningitis," and "hydrorachis." For these five affections, the important question of treatment is dismissed with the following brief paragraph at the foot of the last page in the chapter:

"Treatment of Spinal Diseases.—In acute inflammation of the spinal cord, the patient must be kept in the recumbent position. The prone position is also very useful. Ice may be constantly applied along the spine; blisters, or an issue on each side of the spine have been recommended, or even a few leeches. The value of drug medication is doubtful, but in spinal affections of rheumatic origin, iodide of potassium and colchicum may be employed with advantage. Belladonna, conium, and ergot, are by some considered to act beneficially when the cord is involved."

Not less curtailed are the descriptions of many of the most common and important diseases, so that the book can only claim to be a compend at best. With the exception of a few minor inaccuracies, the work has been carefully done and is fairly creditable, but displays no great originality of thought or investigation.

A MANUAL OF OBSTETRICS. By A. F. A. KING, M.D., Professor of Obstetrics in Columbian Univ., Washington, D. C., and in the Univ. of Vermont, etc. Second Edition. Philadelphia: Henry C. Lea's Sons & Co., 1884. Pp. 338.

This is a text-book for students. The author has compiled with good judgment from Leishman, Play-

fair, and Lusk, a fair outline of the essential principles of midwifery, and has done his work so well that graduates as well as students will find the manual a convenient one.

It is, however, confessedly a work for beginners. Its discriptions are terse and clear, its directions bluntly stated, without unnecessary explanations.

The use of short paragraphs with capitalized headings, makes reference quick and certain, and aids the memory of the learner in preparing for examinations. This is a type of book now becoming quite common in America, an admirable type too, for the purpose intended.

ECZEMA AND ITS MANAGEMENT. A Practical Treatise Based on the Study of Three Thousand Cases of the Disease. By L. DUNCAN BULKLEY, A.M., M.D., Attending Physician, New York Hospital Skin and Venereal Diseases, etc., etc. Second Edition G. P. Putnam's Sons, New York.

Dr. Bulkley, in the second edition of his valuable treatise, has made no radical changes in form or contents. The book still remains, as the author expresses it, "a personal one," representing his own experience, with data of many hundreds of cases from private practice. It covers, nevertheless, all the ground of a complete treatise on eczema thoroughly and systematically, and embodies avowedly the views of prominent dermatologists as well as those of the writer.

Statistics are furnished of 3,000 cases. Separate chapters are devoted to the nosology of eczema, to its pathological anatomy, to its diagnosis, to its treatment, and to its special localities.

A copious general index and a complete formulary are appended, making the treatise one of much practical utility to the practitioner. It will be received with favor by the profession, and serve a useful purpose in supplying a thorough and tangible summary of modern investigations of this protean affection, a knowledge of which really constitutes a key to the whole specialty of dermatology.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

MEDICAL MATTERS BEFORE CONGRESS—THE BUREAU OF ANIMAL INDUSTRY—PROVISIONS OF THE PLEURO-PNEUMONIA BILL AS IT PASSED THE SENATE.—April 29.—As amended and passed by the Senate, the bill providing for the establishment of a Bureau of Animal Industry and the extirpation of contagious cattle diseases, provides, that the Commissioner of Agriculture shall organize in his department a Bureau of Animal Industry, with a chief, who shall be a competent veterinary surgeon, and who shall investigate and report the condition of the domestic animals of the United States, and the causes of contagious, infectious, and communicable diseases among them. He shall also collect such other information on these subjects, as may be valuable to the agricultural, or commercial interests of the United States. For the purposes of the Bureau, the Commissioner of Agriculture is authorized to employ a force, not to exceed twenty persons at one time. The salary of the chief of the Bureau is fixed at $3,000; that of the clerk at $1,500. The Commissioner is to appoint two competent agents, who shall be practical raisers of, or men experienced in, commercial transactions affecting live stock, who shall report the best manner of transporting and caring for animals, and the means to be adopted to suppress and extirpate pleuro-pneumonia and other dangerous contagious or communicable diseases. The compensation of such agents is fixed at $10 per day.

The Commissioner is to prepare, as early as possible, such rules and regulations as may be necessary to extirpate the diseases named, and certify such rules, etc., to the executive authority of each State and Territory, and invite the coöperation of such executive authority in the execution of the Act of Congress. When the rules, etc., shall have been accepted by such executive authority, the Commissioner may expend in the State so accepting so much money as may be necessary for the purpose of the investigations contemplated by the act, and for such disinfection and quarantine measures, as may be necessary to prevent the spread of the disease from one State or Territory into another.

In order to promote exportation of live stock, special investigation shall be made as to the existence of contagious diseases along the dividing line between the United States and foreign countries, and along the transportation lines from all parts of the United States to ports from which cattle are exported, and reports made to the Secretary of the Treasury, who shall coöperate with the State and municipal authority, corporations, and persons engaged in transportation of neat cattle by land or water, in establishing regulations for the safe conveyance of the cattle, and preventing the spread of disease; and the Secretary of the Treasury is authorized to take such steps as may be necessary, not inconsistent with the act, to prevent the exportation of cattle affected with any contagious disease, especially pleuro-pneumonia. Transportation companies are forbidden to transport cattle affected with any contagious disease from one State or Territory to another, but the so-called splenetic or Texas fever is excepted from the category of communicable diseases, so far as regards the transportation of the cattle to market. Violation of the act by railroad companies or vessels is declared a misdemeanor on the part of the manager or captain, punishable by fine not to exceed $5,000, or by imprisonment not to exceed one year, or by both. It is made the duty of the United States District Attorneys to prosecute the cases.

The sum appropriated for the purposes of the act is $150,000. The Commissioner of Agriculture is required to report annually to Congress a full account of the operations of the bureau, a list of all persons employed, their compensation, etc.

The third annual Commencement of the Washington Training School for Nurses took place on May

2, when four skilled women were graduated. Addresses were made by Prof. D. W. Prentiss, M.D., the President of the Board of Trustees, Dr. P. J. Murphy, Surgeon-in-charge of the Columbia Hospital for Women, and Dr. W. W. Godding, Superintendent of the Government Hospital for the Insane.

The graduating exercises of the medical department, University of Georgetown, took place on April 30. Diplomas were conferred by Rev. S. J. Doonan, S.J., President of the University, on the following graduates: Dexter A. Smith, Illinois; J. Paul Chambers, Pennsylvania; Thomas W. Burke, Ireland; and D. Percy Hickling, George E. Harvey, Carroll M. Rawlings and B. F. Madison, District of Columbia. The valedictory address was delivered by Dr. Dexter A. Smith, of the graduating class. The address to the graduates was made by Prof. M. C. Ellzey. Dr. Joseph Taber Johnson then presented a prize valued at $75 to Dr. Dexter A. Smith for passing the best examination; a prize, consisting of a case of surgical instruments, to Dr. John B. Hawes, of California, and a set of post-mortem instruments to Dr. J. W. Morgan, of the District of Columbia.

The American Surgical Association completed its sessions on May 3. The meetings were held in the National Museum, and some forty members were registered. A telegram of sympathy was sent to Prof. Gross. Almost all of the papers published in the official programme were read and discussed. Private receptions and an informal dinner constituted the entertainments.

MISCELLANEOUS.

NERVOUS SIALORRHŒA.—M. Gilles de la Tourette (*Revue Medicale*) records the case of a patient in the service of M. Charcot, who for some time had suffered from nervous and cerebral symptoms, and who was suddenly attacked with a sharp pain in the parotid region, which was immediately followed by an abundant secretion of saliva, which was clear and viscid, presenting all the characteristics of parotid saliva. This sialorrhœa followed the same oscillations as the pain, diminishing with it and increasing with the neuralgic exacerbations. In twenty-four hours there was a discharge of twelve hundred grammes of liquid, much more than has been noted in pathological cases or after the use of sialogogues. One peculiarity was that physical and chemical examination showed this fluid to be purely the secretion of the parotid gland. It is absolutely impossible by means of jaborandi, or other sialogogues, to disassociate the various glandular secretions in salivation. Another point is that the saliva was loaded with white corpuscles, and the epithelial cells of the mucous membrane of the mouth, but contained no trace of the caciliform cellules of the glandular crypts. These hypercrinic disturbances in the course of neuralgic attacks are in no ways new—the discharge of tears and nasal discharges are among the prosopalgias—but such an excessive secretion with a moderate neuralgia, has not before been recorded. Recognizing the neuropathic condition of the subject, we are justified in determining the cause as in the manifest disturbance of the nerve centers.

A case of an ataxic, reported by Archibald Wilson, in the *France Medicale*, presents certain resemblances to the one just referred to. This latter patient presented symptoms that were very characteristic of his trouble, such as a want of coördination in walking, loss of the patella reflex, fulgurating pains, etc. Besides which, he had a modification of the cutaneous sensibility, and attacks of suffocation which were indicative of laryngeal affection. He also suffered from sudden crises of salivation and of urination which occurred without any appreciable cause. M. Feré designated them as perfect diarrhœas, occurring from some nervous influence exercised upon the spinal cord.

AMERICAN NEWSPAPERS IN 1884.—From the edition of Messrs. Geo. P. Rowell & Co.'s American Newspaper Directory, now in press, it appears that the newspapers and periodicals of all kinds at present issued in the United States and Canada reach a grand total of 13,402. This is a net gain of precisely 1,600 during the past twelve months, and exhibits an increase of 5,618 over the total number published just ten years since. The increase in 1874 over the total for 1873 was 493. During the past year the dailies have increased from 1,138 to 1,254; the weeklies from 9,062 to 10,028; and the monthlies from 1,091 to 1,499. The greatest increase is in the Western States. Illinois, for instance, now shows 1,009 papers in place of last year's total of 904, while Missouri issues 604 instead of the 523 reported in 1883. Other leading Western States also exhibit a great percentage of increase. The total number of papers in New York State is 1,523, against 1,399 in 1883. Canada has shared in the general increase.

NEW BOOKS.

Terrier. Remarques cliniques sur un cas d'ophtalmie survenu dans le cours d'un rhumatisme articulaire aigu. Paris: Davy 8vo., 15 pp.

Vernenil. Amputation du col de l'utérus avec l'écraseur linéaire, remarques sur l'emploi de cet instrument. Paris: Asselin et Cie. 8vo., 39 pp.

Vincent, A. Recherches sur l'élimination de l'iodure de potassium par les urines. Lyon: Imprimené nouvelle. 4vo., 45 pp.

Adler, Dr. Hans. Drei Fälle v. Jequirity-Ophthalmie; über die Nothwendigkeit der Einführung neuer Massregeln zur Bekämpfung der Blennorrhoea neonatorum; als e. der häufigsten Ursachen der Erblindung. Wiesbaden: Bergmann. 8vo., 12 pp.

Fritsch, Med.-R. Dir. Prof. Dr. Heinr. Die Krankheiten der Frauen, Aerzten u. Studirenden geschildert. 2. umgearb. u. verm. Aufl. Mit 164 Abbildgn. in Holzschn. 8vo, x, 453 pp. Braunschweig, Wreden.

Hoffmann, Lehr. Dr. G. Acht Skelett-Tafeln (in Lichtdr.) zum Einzeichnen v. Gelenkbändern, Muskeln u. anderen Organen. Ein Hülfsmittel zum Studium der Anatomie d. Menschen. Fol., 1 S. Text. Berlin: Gaertner. In Mappe.

Löwit, Privatdoc. Assist. Dr. M. Ueber die Bildung rother u. weisser Blutkörperchen. Mit 2 lith. Taf. Aus "Sitzungsber. d. k. Akad. d. Wiss." Lex 8, 46 pp. Wien, 1883: Gerold Sohn.

Pilley, J. J. Hygiene; or, the Principles of Health, Adapted to the Requirements of the Science and Art Department, South Kensington. 8vo, 178 pp. London: Gill. 1s 6d.

Thudichum, J. L. W. Aids to Public Health. 12mo. 50 pp. London: Bailliere. 1s.

Thudichum, J. L. W. A Treatise on the Chemical Constitution of the Brain, based throughout on Original Researches. 8vo, 282 pp. London: Bailliere. 1s 6d.

Tyrrell, W. The Tonic Treatment of Epilepsy. 4th edit. 8vo. London: Bogue. 2s 6d.

Woakes, E. Post-Nasal Catarrh and Diseases of the Nose, causing Deafness, being Vol. I of the 3d edit. of "Deafness, Giddiness, and Noises in the Head." 8vo, 220 pp. London: Lewis. 6s 6d.

Archambault. Leçons Cliniques sur les Maladies des Enfants. 8vo, Vol. VIII, 158 pp. Paris: Delahage et Lecrosnier.

Auvard, A. De la Pirce à Os et du Cranioclaste, étude historique et experimentale. 4to, 248 pp. Paris: Doin.

Chartemesse, A. Étude sur la Méningite tuberculeuse de l'adults, les formes a normales en particulier. 4to, 188 pp. Paris: Goupy et Jourdan.

Chavée-Leroy. Les Microbes Organisés at la Crémation; Réflexions et Objections sur les Mémoires de M.M. Tyndall et Pasteur. 2d edit., revue et augmentie. 12mo, 38 pp., avec figure. Paris: Michelet. 60c.

Citerne, P. Contribution à l'étude des Abcès froids des Parvis du Thorax. 8vo, 65 pp. Paris: Davy.

Debove. Leçons Cliniques et Thérapeutiques sur la Tuberculose Parasitaire, faites à la Clinique de la Pitié. 8vo, 96 pp. Paris: Delahage et Lecrosnier.

Fournié, A. Hontribution à l'étude du Convallaria Maialis. 4to, 51 pp. Montpellier: Hamelin frères.

Hamon, A. Hygiène Publique; Étude sur les Eaux Potables et le Plomb. 12mo, 72 pp. Paris: Delahage et Lecrosnier.

Henrionnet, P. De l'engagemet de l'extrémité Pelvienne pendant la Grossesse. 8vo, 57 pp. Paris: Davy.

Kocher, A. De la Criminalité chez les Arabes au Point de Vue de la Pratique Médico-Judiciaire en Algérie. 4to, IV, 243 pp. Lyon: Pitrat ainé.

Lamaison, H. Du lupus Érythémateux. 4to, 85 pp. Montpellier: Cristin, Serre et Ricome.

Mehling, S. J. Cure Radicale de l'Hydrocèle par la Méthode de l'Incision avec les Précautions Antiseptiques. 8vo, 132 pp. Montpellier: Bœhm et fils.

Neugebauer, F. Contribution à la Pathogénie et au Diagnostic du Bassin Vicie par le Glissement Vertébræ (spondylisthésis). Paris: Lauwereyns.

Nicolas, A. Contribution à l'Étude de l'Arthrotomie Antiseptique. 8vo, 161 pp. Nancy: Sordvillet.

Flint, Austin. A Treatise on the Principles and Practice of Medicine. 5th edition, rev., with an appendix on the researches of Koch, and their bearings on the ætiology, pathology, diagnosis, prognosis, and treatment of pulmonary phthisis. Phila: H. C. Leas Sons & Co. 8vo., 1,160 pp., cl. $5.50.

Hun, H. A Guide to American Medical Students in Europe. New York: W. Wood & Co. 151 pp., 8vo., cloth. $1.25.

Kelsey, C B. The Pathology, Diagnosis, and Treatment of Diseases of the Rectum and Anus. New York: W. Wood & Co. 430 pp., il. and pl., 8vo., cl. $4.

Paul, Constantin. Diagnosis and Treatment of Diseases of the Heart; from the French. New York: W. Wood & Co. 335 pp., il., 12mo. (Wood's Lib. of Standard Medical Authors) Cl. subs., $1.25.

Power, H. Elements of Human Physiology. Phila: H. C. Lea's Sons & Co. 399 pp., 47 il, 8vo (students' Series of Manuals), flex. cl. $1 50.

Richardson, B. Ward. The Field of Disease: a book of preventive medicine. Phila: H. C. Lea's Sons & Co. 737 pp., 8vo., cl. $4; shp., $5; hf. Rus., $5.50.

Roosa, D. B. St. John. A Vest Pocket Medical Lexicon. New rev ed. New York: W. Wood & Co. 320 pp., fl. roan 75c.

Woodhead, G. Sims Practical Pathology. Phila: H. C. Lea's Sons & Co. 484 pp., 136 col. pl., 8vo., cloth. $6.

Carey, A. Principles of Hygiene. 12mo., pp 158. 1s. 6d. London: Murby.

Fluckiger, F. A. The Chinchona Barks Pharmacognostically Considered. Translated from the original text, with some additional notes, by Frederick B. Power With 8 lithographic plates and 1 woodcut. 8vo. 7s. London: Churchill.

Girdlestone, E. D. Vivisection in its Scientific, Religious, and Moral Aspects. 8vo., pp. 68. 1s. London: Simpkin.

Jones, H M. On the Treatment of Spinal Curvatures by Extension and Jacket. With Remarks on some Affections of the Hip, Knee, and Ankle Joints. 8vo., pp. 138. 4s. 6d. London: Churchill.

Philpot, H. J. Diabetes Mollitus: a synopsis of its pathology, ætiology, incipient and progressive symptoms, causes of death, sugar tests, and treatment. 8vo., pp. 112. 5s London: Low.

Abadie, C. Quelques considérations practiques sur l'ophtalmie sympathique 8vo, 10 pp. Paris: Davy.

Andret, L. Des manifestations cutanées de la blennorrhagie. 8vo., 40 pp. Paris: Davy.

Arnaud, P. Contribution à l'étude de l'endométrite dans la blennorrhagie. 8vo., 99 pp. Paris: Davy.

Bardy, H. L'Empoisonnement par les champignons. 8vo., 19 pp. Saint-Die, Il. Humbert.

Batault. Contribution à l'étude du pausement des fractures compliqués de plaies. 8vo, 59 pp. Paris: Davy.

Biat, V. Péritonite tuberculeuse à forme ascitique. 8vo., 58 pp. Paris: Davy.

Bourel-Roncière, A. Kystes hydatiques des muscles. 8vo., 47 pp. Paris: Davy.

Doléns, A. Observation d'un cas de rupture utérine suivie de guérison. 8vo., 24 pp. Paris: Davy.

List of Changes in the Stations of Medical Officers, U. S. Navy, for the Week ending May 10, 1884.

P. A. Surgeon C. W. Gravatt, detached from Naval Hospital, Chelsea, and ordered to U. S. Str. "Michigan."

P. A. Surgeon G. E. H. Harmon, detached from "Michigan" and granted leave of absence.

Assistant-Surgeon T. M. Edgar, ordered for examination preliminary to promotion.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from may 3, 1884, to May 9, 1884.

Webster, Warren, Major and Surgeon, granted leave of absence for six months, from April 29, 1884, on account of sickness. (Par. 5, S. O. 103, A. G. O., May 3, 1884.)

Sternberg, Geo. M., Major and Surgeon, now at Governor's Island, New York Harbor, ordered to repair to this city (Washington, D. C.) to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to meet on May 5, 1884, and on adjournment of the Association to return to Governor's Island. (Par. 2, S.O. 103, A. G. O., May 3, 1884.)

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